The National Future Farmer

Owned and Published by the Future Farmers of America

February-March, 1963

"Son, we've got another 130-bushel stand!"

"Spot counts show our 450A planter got us 19,000 plants per acre" says Roger Joachim, Owatonna, Minn.

"This full stand of husky, tightly-grouped hills, plus chemical protection from weeds and insects, promises us a 130-bushel corn yield again this year.

"And runts are as scarce as misses! Our 450A starts every plant at same even depth . . . places fertilizer uniformly, 2½-inches from row, to speed early growth.

"We protect our stand from weeds and insects with granular chemicals. They're easy to apply uniformly for surer kill. The 450A's accuracy at higher speeds helps us avoid losses due to bad weather delays."

See your IH dealer for world's most accurate high-speed corn planter—the 450A! Equip it, as shown here, to apply fertilizer and granular chemicals, for controlling both weeds and insects as you plant. Save fill-stops with 170-pound, plastic fertilizer hoppers.

INTERNATIONAL HARVESTER

World's largest manufacturer of farm equipment

Firestone FIELD & ROAD outpulls tires* that cost over 1/3 more ...and ends excessive road wear!

FIRESTONE FIELD & ROAD GUARANTEE

If, within 60 days of the date of purchase, the new Field & Road tire does not outpull any other replacement rear tractor tire you've ever bought, your Firestone Dealer or Store will (1) refund within 30 days thereafter the amount paid or (2) allow the amount paid in full credit on any other Firestone rear tractor tires. (This traction guarantee does not apply to special-purpose rear tractor tires used in rice and cane farming.) The new Firestone Field & Road Tractor Tire is further guaranteed against defects in workmanship and materials for the life of the original tread. This guarantee provides for replacement of the same size and type of tire pro-rated on tread bar wear and based on list prices current at time of adjustment.

*Replacement tires

FARM-PROVED BY FARMERS

LeRoy Frontz, Allenwood, Penn.: "We quit plowing due to dryness and slippage. We tried Firestone Field & Road tires and they bit in and kept pulling."

Edward Dill, Platteville, Colo.: "Pulls better in both mud and sand than any tractor tires I've used. On hard dirt they'll do twice what other tires do."

Robert J. Thomas, Clinton, Ill.: "It's the best. We do a lot of 'roading' and Field & Road tires wear much less. They clean good. Great traction, too."

Firestone YOUR SYMBOL OF QUALITY AND SERVICE *Enjoy the Voice of Firestone every Sunday Evening over ABC Television.*

ADVERTISERS INDEX

Apparel & Hobbies

H. D. Lee Company ... 8
Levi Strauss & Company ... 36
Tandy Leather Company ... 48
Frank A. Hoppe, Inc. ... 58
Future Farmers Supply Service ... 58
House of 1000 Mysteries ... 60

Farm Equipment

International Harvester Farm Equipment ... 2
F. E. Myers & Bro. Company ... 10
Keystone Steel & Wire Company ... 15
Lincoln Electric Company ... 20
Massey-Ferguson ... 32-33
Allis-Chalmers ... 39
The Oliver Corporation ... 47
Paragon Electric Company ... 48
J. I. Case Company ... 53

Feed & Supplies

Ralston Purina Company ... 5
Fort Dodge Laboratories ... 6
The Kraft Foods Company ... 12-13
Albers Milling Company ... 16
Oyster Shell Products Company ... 20
Smith-Douglass Company ... 21
Armour Agricultural Chemical Company ... 49
Funk Bros. Seed Company ... 51
Du Pont ... 63

General

United States Army ... 9
American Telephone & Telegraph Company ... 37
Greetings Unlimited ... 56
Anna Elizabeth Wade ... 56
McAfee Candy Company ... 56
Doane Agricultural Service ... 59
Match Corporation of America ... 60
Bob Jones University ... 64

Livestock

American Guernsey Cattle Club ... 58
National Suffolk Sheep Assn. ... 58
American Cheviot Sheep Society ... 60
Beery School of Horsemanship ... 60

Transportation & Travel

Firestone Tire & Rubber Company ... 3
Texaco, Inc. ... 7
American Honda Motor Company ... 11
Kendall Refining Company ... 14
Hotel Continental ... 16
AC Spark Plug Division, General Motors Corporation ... 17
The B. F. Goodrich Company ... 18-19
Perfect Circle Corporation ... 22
General Motors Corporation ... 41
Union Pacific Railroad ... 46
Ford Car Division Ford Motor Company ... 57
Bird Engineering ... 60
Plankinton House ... 60
Gilliom Manufacturing Company ... 60
Cushman Motors ... 61

ADDRESS ALL CORRESPONDENCE TO: *The National FUTURE FARMER*, Box 29, Alexandria, Virginia. Offices are located in the Future Farmers Building on U. S. Route One, eight miles south of Alexandria, Virginia.

The National FUTURE FARMER is published bimonthly by the Future Farmers of America, Inc., at 810 Rhode Island Avenue, N. E., Washington, D. C. Second class postage paid at Washington, D. C.

Copyright 1962 by the Future Farmers of America.

Single subscription is 75c per year in U. S. and possessions. Foreign subscriptions $1.00 per year. Single copies 20c in U. S.

CHANGE OF ADDRESS: Send both old and new addresses to Circulation Department, *The National FUTURE FARMER*, Box 29, Alexandria, Virginia.

The National Future Farmer

Owned and Published by the Future Farmers of America

FEBRUARY-MARCH, 1963 • Vol. 11, No. 3

EDITORIAL CONTENTS

About the FFA

Goodwill Tour ... 6
FFA Leader Retires ... 6
Student Exchange ... 20
Kenny McMillan Day ... 23
Fender's Future in Forestry ... 24
Pahoa's Pasture Paddocks ... 27
Out on the Town ... 29
Controlled Breeding ... 31
Ideas for FFA Week ... 35
A Boy, a Goal, a Future ... 50
The FFA in Action ... 54-55

Features

Are You Overlooking Social Security? ... 10
Planning Student Loans ... 25
Rural Recreation ... 26-27
Home Farm Shops ... 28
Prevent Trouble with a Tractor Check-up ... 30
Cash Rent or Sharecrop ... 52
History of the Breed (Yorkshire) ... 58

Illustrated Section

The Story of Farming ... 42
Nitrogen, the Fertilizer Paradox ... 43
Winter Safety ... 44
A True Story of FFA ... 45

Sports and Fiction

Tricky and the Tall Man ... 40
Sportrait ... 61
Make Your Own Basketball Backboard ... 56

Departments

Looking Ahead ... 8
Reader Roundup ... 12
Your Editors Say ... 14
Something New ... 16
Future Farmers' Bookshelf ... 36
Photo Roundup ... 38
Free for You ... 60
Jokes ... 62

OUR COVER (Photo by Grant Heilman)—"Here's where you loosen the shaft!" Farmer John Sangrey tells his three Future Farmer visitors. A field trip to Sangrey's farm shop in Lancaster County, Pennsylvania, was part of vo-ag training for the neighboring Penn Manor Chapter.

MAGAZINE STAFF

EDITOR, *Wilson W. Carnes*

ASSOCIATE EDITORS
Howard R. Carter
Paul S. Weller

EDITORIAL ASSISTANTS
Gail Butler
Betty J. Harris

CIRCULATION ASSISTANTS
Norma Salvatore
Beulah Keeter

PROMOTION ASSISTANT
Jim Hayhurst

ADVERTISING MANAGER
John C. Foltz

REGIONAL AD MANAGERS
Charles R. Ocker
Lennie Gamage
Len Richardson

ADVERTISING ASSISTANT
Rosalind N. Pazzato

BUSINESS MANAGER, *V. Stanley Allen*

BOARD OF DIRECTORS

CHAIRMAN, *A. W. Tenney*

MEMBERS
J. G. Bryant
H. F. Duis
Herbert R. Damisch
Tamotsu Horii
H. E. Edwards
M. C. Gaar
H. N. Hunsicker
E. J. Johnson

EXECUTIVE SECRETARY
Wm. Paul Gray

DIRECTOR OF PUBLIC RELATIONS
John Farrar

NATIONAL OFFICERS

PRESIDENT
Kenny McMillan, Illinois

VICE PRESIDENTS
Richard Mottola, Massachusetts
Larry Whittington, North Carolina
Jerry Diefenderfer, California
Duane Leach, Minnesota

STUDENT SECRETARY
Vern France, Idaho

Watch for Purina's new trophies

The rough, plaster models shown above are just hints of two bright, new Purina Championship trophies in the making. (You'll have a chance to win one in the future.)

Here's the story behind the trophies: Several years ago Purina asked a famous sculptor, Carl Mose, to produce a bronze statue depicting a typical farm boy rolling up his sleeves to tackle a man-sized job. This symbol was to be placed in the quadrangle of the Danforth Farm Youth Center near Gray Summit, Missouri. Mose made the statue, and each year thousands of visitors admire it when they come to the Center to see the beef steers, dairy heifers, lambs and pigs growing on experimental Purina Chows.

Later, Mose was again engaged, to carve a similar statue of a young farm girl. It now stands on the lawn at the National 4-H Club Foundation near Washington, D.C., where thousands of folks see it every year.

What better models than these two widely recognized statues for new Purina Championship trophies? Sculptor Carl Mose was called again and asked to make miniatures of the two statues.

His first efforts—the first rough, plaster miniatures—are above. They don't look the same today. Working with Gene Hoy, Purina artist who designed the trophies, sculptor Mose has refined the figures to look more nearly like the statues. The casting molds of the figures have been made. The final step—to pour the bronze trophies, polish them, and put them on a special base with room for your name to be inscribed.

Watch for a picture of the new trophies in a future issue of this magazine. (And ask your local Purina Dealer or Salesman how to win one.)

PURINA

Ralston Purina Company, Checkerboard Square, St. Louis 2, Mo.

Illinois Grand Champions "given 'Clovite' almost from moment they were picked for showing"

LU ANN TUCKER, 11-year-old 4-H member, of Chrisman, Ill., and Herman, her Shorthorn steer, which was named Grand Champion-All Breeds, Open Steer Class, at the 1962 Illinois State Fair. At the left are her dad, Malcolm B. Tucker, and her brother Otho Bruce. Lu Ann also showed the Reserve Grand Champion Female, Open Class.

Lu Ann's father first started using CLOVITE on his breeding herd five years ago, to straighten out a vitamin A deficiency. He suggested that Lu Ann give CLOVITE a try on her show animals. Mr. Tucker reports that her two 1962 winners were given CLOVITE almost from the moment they were picked for showing.

"Inside of only two weeks we could see a remarkable change—new glossiness, sheen and deeper color in the coats, and increased appetites." He goes on, "Our show prospects get CLOVITE daily with every feeding. When we travel the show circuit, CLOVITE keeps a better fill on."

No product could receive a higher recommendation than this, from Mr. Tucker, and his daughter who owns, raises and exhibits Champion beeves.

• • •

CLOVITE is a concentrated vitamin source. Supplies essential quantities of *natural* vitamins A, D and B12, along with thiamine, riboflavin, niacin, choline and pantothenic acid. Its fish-oil meal base helps conserve the vitamin properties. Mixes with any feed. Adds palatability. Available in 25 lb. pails or 100 lb. drums, from your local veterinarian. See him soon—*he knows best, what's best.* Fort Dodge Laboratories, Fort Dodge, Iowa.

nothing so good as

Clovite®

FORT DODGE®

Goodwill Tour

YOUR national FFA officers will be on their annual Goodwill Tour from January 27 to February 22. They will travel to about 13 major cities and visit with leaders of business and industrial concerns and organizations.

The officers leave Washington, D. C., after a meeting of the Board of Directors and Student Officers and go to Richmond. From there they work their way northward to New York and westward to Chicago with stops at other cities en route.

The national officers will be representing the nearly 380,000 members of the FFA. In their visits, they will be telling the story of vocational agriculture and the FFA.

FFA Leader Retires

FOR ALMOST as long as Indiana's FFA Association has been in existence, a quiet-mannered man has served as the state's executive secretary-treasurer. The latter part of June, Professor K. W. Kiltz will retire and bring to an end 32 years of dedicated service to Indiana Future Farmers.

Professor Kiltz received his degree from Purdue University in 1922 and a master's degree eight years later from Cornell. During this period he taught vo-ag in addition to being a grade school principal. In 1929 he returned to Purdue to become a member of the staff. He was appointed assistant professor in 1939 and associate professor in 1946.

In 1959, E. E. Clanin, head teacher trainer at Purdue, made the following observation of Professor Kiltz: "As a sincere, dedicated agricultural educator, Professor Kiltz has served Indiana farm youth well. His devotion to the causes of the Indiana FFA Association is unparalleled. The trust which he has held in counseling with the state officers of the organization indicates the dedication with which he has approached his responsibility, and the young men revere him as they look back upon their mutual experiences."

During his 32 years of service, Indiana has had five honorary American Farmers, 122 American Farmers, and three national officers, two of which were national presidents in 1941-42 and 1947-48. To his successor he will leave quite a challenge in the Indiana state office.—*Jim Napier.*

This is Texaco's new motor oil that stops waste, stops farm machinery from wasting money in fuel, wear, and repairs

Deposits building up in your engine are power robbers, fuel wasters, machine wreckers. They're bad medicine—and costly. Fact is, they can lead to expensive repair bills that can put a real dent in your season's profits. That's why it's so important to use new Havoline Motor Oil—right from the start. Havoline was tested in hundreds of hours of rugged tests against 4 other leading motor oils. Texaco's new Havoline proved that it stops waste best because it stops deposits best. That's right—with new Havoline, deposits can't form, can't cause waste. With new Havoline, your farm machinery (your second biggest investment) can work for you years longer. New Havoline gives your tractor, truck, and car the finest protection your money can buy. Call your Texaco man for new Havoline—and for the other Texaco farm products you need. It pays to *trust the man who wears the star.*

Lee RIDERS.®
Cowboy Pants & Jackets

the brand working cowboys wear.

Ranch-barn, rodeo-bred Lee Riders have no match when it comes to rugged, browny toughness, wearing comfort and authentic western styling. The pants are slim, trim, hip hugging; the jacket snug and comfortable, yet there's ample shoulder room for easy arm movement. Both are made from Lee's special 13¾ oz. cowboy denim. The next time you need cowboy pants ask for Lee Riders.

SANFORIZED - GUARANTEED

Lee

Wear the best... always look for this branded Lee label.

THE H.D. LEE COMPANY, INC.
KANSAS CITY, MISSOURI

Looking Ahead

MORE UNIFORM LAMBS

Controlling the heat periods of ewes to a specific hour of a specific day for artificial breeding may soon be a reality according to University of Illinois scientists. In this way, lambing of an entire flock would occur within a few days. The result would be more uniform lambs, better utilization of buildings and equipment, and simpler management. The control of ovulation would be done by keeping ewes out of heat with progesterone. After treatment ends, all ewes would come back into heat at the same time.

MASTITIS FROM FORAGE?

Forages may affect the amount of mastitis in dairy herds, say Ohio researchers. Recent tests have shown big differences in amounts of mastitis in cows kept together but fed different forages. They found that cows fed a legume-grass forage as green chop had more mastitis than similarly managed cows getting the legume-grass mixture as silage. Tests showed that forages may be more highly charged in certain seasons and cause mastitis accordingly. The specialists feel the key may be hormones found in forage, but haven't found a formula to avoid mastitis as yet.

COMBINING CORN?

Using a combine to harvest corn is a prediction made as a result of experimental work by one farm equipment manufacturer. With one adjustment the combine shells corn, breaks the cob into one-inch pieces, then elevates the mix to the grain tank. Another adjustment and it cracks the kernels and breaks the cob into still smaller pieces. Using this self-propelled machine, the farmer can harvest 30-percent-moisture corn and prevent expensive field losses.

SEXING CHICKS BY COLOR

Selective breeding at the Ohio Agricultural Experiment Station has developed a new strain of chicks that can be sexed and graded by their color. Researchers call the fast-growing strain White Gold because careful breeding results in the chicks' hatching in these two colors. Standard broiler strains were used in crossbreeding until a fast-growing chick with the desired coloring was achieved. Now poultry specialists know that breeding a gold male with a white female will always result in white males and gold females. And so it goes . . .

MINIATURE HOGS

Now we even have compact pigs! Specialists at the Virginia Polytechnic Institute have a herd foundation of miniature hogs that will weigh only 125 to 150 pounds when fully grown. The two gilts and a boar are the result of years of inbreeding a wild boar from Cataline Island, some piney woods pigs from Louisiana, and guinea hogs from Alabama. Three times as many of the miniature pigs can be kept in a normal hogpen, and feed needs are similarly reduced.

WHEAT WAFERS FOR SURVIVAL

Work is under way on special whole-wheat crackers for use as survival rations during emergencies. Oregon State University students are now evaluating 16 different recipes. The wafers are made from whole wheat, fat, malt, and salt; then they are lightly toasted and sealed in cans. The finished product is flaky and ricelike and can be topped with milk, spread with jam, or eaten dry. After five years of testing, the wafers may be put into use not only for survival but for hikers and soldiers.

HAY BY THE CUBE

Hay has joined the ranks of convenience foods in California in the form of 1¼-inch cubes. A commercial company in the northern part of the state has developed a mobile machine to compress hay into small cubes with almost no loss of leaves. Dairymen using the cubed hay report 100 percent hay consumption, no waste, and excellent adaptation to automatic feeding systems. Best part is that the same amount of hay will now take only one fourth as much storage space.

What does it take to feel like a man?

It takes action to feel like a man. Takes pride and courage. But in today's modern world *it also takes training. Technical* training. Ask any mechanic. Ask any missile man.

In today's modern Army all units are fast-moving. Flexible. Men and machines are closely interlocked. And since the machines are complex, men have to be extra skilled to handle them. The Army *makes* men like this—technically skilled, competent, confident.

The training you get can give you a good future. Almost unlimited. You can be expert in areas like engineering, missiles, electronics, motor mechanics—or any of 150 other fields!

And of course, if you are qualified, you can receive extensive training in other fields like Combat Arms—Infantry, Armor or Artillery. You will be proud to be a member of any one of them. Find out how to feel like a man in today's fast-changing world. See your local Army recruiter today.

On America's leading farms

Myers

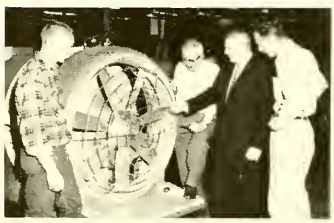
PUMPS and POWER SPRAYERS

help the farmer produce more ... and live better

For over 90 years, Myers products have helped farmers increase productivity and reduce operating costs. This is a contribution of which The F. E. Myers & Bro. Co. is proud.

The company works regularly with county agents, Vo-Ag teachers and other persons interested in gaining new information about better farming methods. Myers' field representatives are available for technical assistance.

Myers' field representatives cooperate in educational training on farm spraying and water supplies.



For information or free literature on:
- Pumps and Water Systems
- Water Conditioning
- Farm Spraying

write to the Educational Services Department.

Myers

The F. E. Myers & Bro. Co.
ASHLAND, OHIO KITCHENER, ONTARIO
SUBSIDIARY OF THE McNEIL MACHINE & ENGINEERING CO.

Are you overlooking—

Social Security?

WHEN YOUNG farmers sit down this month to compile their list of receipts and expenses for income tax purposes, many will overlook an important part of the farm business. Farm social security, an often misunderstood and too little appreciated benefit, is an obligation of self-employed farmers making over $400 net annual income.

Being self-employed, farmers must take the responsibility of reporting and paying their own social security tax. There is no employer to make deductions from the milk or egg check.

But why should young farmers with already sizable expenses pay out for a retirement that may be 45 years away? Let's look into social security and decide for ourselves.

The protection you get for your social security tax dollars does not stop with retirement benefits. If you are unable to work because of a permanent disability, part of your lost income will be replaced by social security. The family maximum is $254 a month for you, your children under 18, and your wife. Similar benefits will go to your wife in the case of your premature death.

These benefits are payable after comparatively short periods of coverage: 1½ years out of the three years preceding your death, and five years out of the 10 years preceding your disability. It is this lifetime protection that has caused social security to be called one of your most inexpensive insurance policies.

On your total net income under $4,800, you will pay 4.7 percent when filing your 1962 income tax form. The rate will increase to 5.4 percent on your 1963 earnings. You can receive up to $127 per month if your average earnings were $4,800 when you became disabled.

Suppose you are married and 25 years of age and a fall has left you in a wheel chair and unable to work. Your net income averaged $4,200 per year. You would have paid the 4.7 percent of this amount or $197.40 per year. Now you would be eligible to receive $116 per month for yourself as long as you are disabled—for life if that be the case. In addition, you would receive $58 for your wife if you have a dependent under 18, plus $58 for each child until the family maximum of $254 is reached.

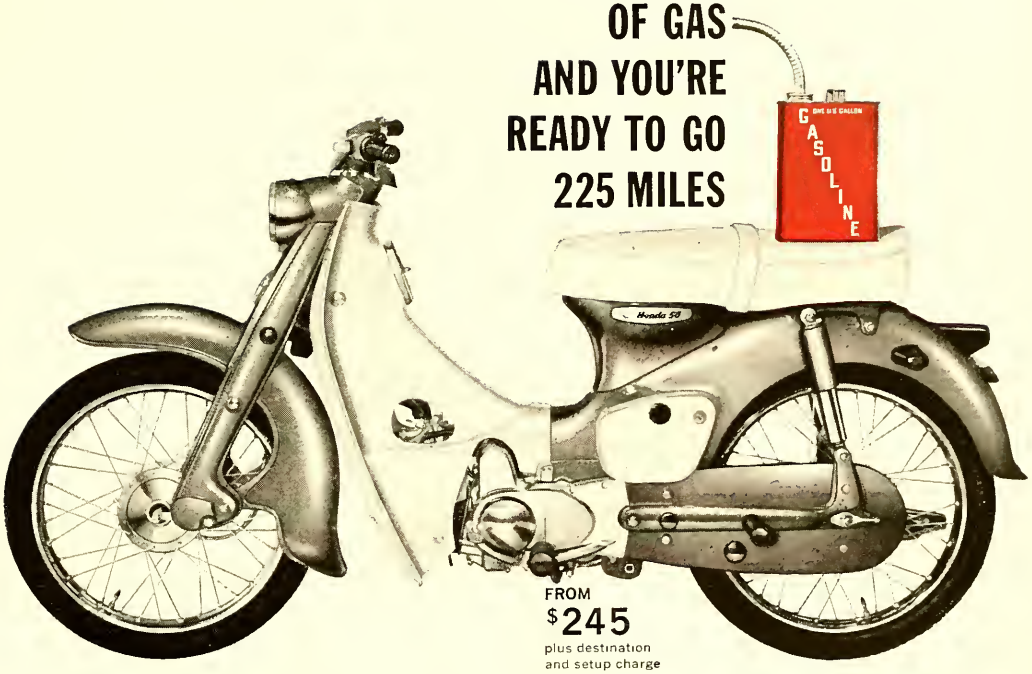
But there's one thing to remember. You must pay in for a specific period of time before becoming eligible for social security retirement benefits. If you were born after 1926, as with Future Farmers, this would be a minimum of 10 years.

You do not have to report your net earnings if they are less than $400 a year. If the farm, however, produces a gross income of at least $600 a year, you may report two thirds of your gross up to a total of $1,800, and then pay a tax on up to $1,200 regardless of your actual net earnings. If the gross farm income is more than $1,800, you will have to figure your actual net earnings. But if this net is less than $1,200 and your gross is more than $1,800, you may, if you wish, report $1,200.

If, however, your earnings are not great enough to require you to file an income tax return, you should still report any credits for social security.

Self-employment social security tax is computed on Schedule F of Form 1040 when making out income tax returns. Complete information is as close as your local social security office, while forms and instructions are available from your District Director of Internal Revenue.

JUST ADD A GALLON OF GAS AND YOU'RE READY TO GO 225 MILES



FROM
$245
plus destination
and setup charge

Up to 225 miles per gallon is no trick at all for the thrifty HONDA "50". But its amazing economy and low price tag are only the beginning. Thousands of Americans each month are discovering how much fun two-wheel travel can be... to work, to school, to outdoor recreation spots... on the HONDA "50". Traffic's a breeze. You can park the "50" anywhere. And HONDA's superb 4-stroke, 50 cc OHV power plant—the envy of engine manufacturers the world over—purrs like a kitten at 45 mph cruising speed. With its automatic clutch, 3-speed transmission and advanced, dual cam-type brakes front and rear, even a youngster can ride the HONDA "50" safely and easily the first time out! ■ Get acquainted with America's new riding habit (there are 4 beautiful models, including the all-new Trail "55") at one of the more than 800 HONDA dealers across the country. For the dealer nearest you, call Western Union by number and ask for OPERATOR 25. Or check your Yellow Pages.

HONDA

World's Largest Motorcycle Manufacturer

AMERICAN HONDA MOTOR CO., INC., P.O. BOX 19-488, LOS ANGELES, CALIF.

AMERICAN HONDA MOTOR CO., INC. Dept. NF63-2
P.O. Box 20918, Pico Heights Station, Los Angeles 6, Calif.

Please send literature on the HONDA "50" line to:

NAME _____

STREET _____

CITY _____ ZONE _____

STATE _____ PHONE _____

☐ I am especially interested in HONDA TRAIL "55".

☐ Include literature on complete HONDA motorcycle line (9 models from 125 to 305cc).

COPYRIGHT 1963 AMERICAN HONDA MOTOR CO., INC.

Eldon, Missouri

I am enrolled in the College of Agriculture at the University of Missouri but am still active in the Eldon Chapter of the FFA. *The National FUTURE FARMER* gives me a great deal of information for my college studies. The stories of individual Future Farmers that have made achievements set forth goals for other Future Farmers to work toward. Your magazine's variety of interesting articles makes it one of the best magazines that I have an opportunity to read. Keep up the good work.

Robert G. Sparks

Thanks, Robert, for your vote of confidence. We hope other former Future Farmers will continue to support their magazine after leaving high school.—Ed.

Tipton, Iowa

We have been very happy with the Calendars and our association with the Future Farmers of America. We are pleased to give a calendar with enough prestige that our customers will stop each year and ask if they might pick up a new FFA Calendar.

Farmers Feed and Supply Company

Atlanta, Georgia

Please send me the free booklets offered in your last issue. I didn't clip out the coupon because this is a borrowed copy.

I just purchased 11.5 acres out in Conyers and will be moving there soon. I'm building a home there and then plan to put the land in hay and pasture, in addition to my other land. I plan to have some horses and a calf, so please send me as many other booklets as you can.

Melvin Simpson

Graceville, Florida

You will note on the enclosed (calendar) order there is no school or chapter name to be shown on the calendars. The reason for this is more than one chapter will receive them.

As a state officer, I sold these calendars in the interest of the local chapters, who will receive the benefit.

Marlin Register
State Vice President

That's being a real service to your chapters, Marlin. It is support like this that makes the calendar program a success.—Ed.

Shelbyville, Kentucky

While attending the National Convention, I was really pleased by the way the FFA members acted. I never once saw an FFA member doing anything wrong. I became acquainted with many fine boys. It was really a trip that I will never forget.

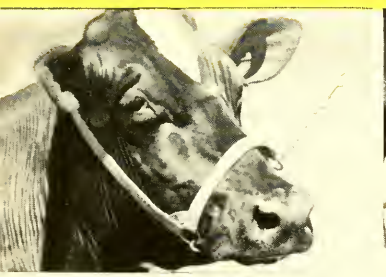
Allen Thompson

Fredericksburg, Virginia

I am very interested in the FFA, though I have not become a member yet. I like your magazine to which I have just subscribed and would be glad

Balance and unlock feed nutrition

GIVE THEM THE



Help your animals get more nutritional power from their ration—and *balance* their rations, too: Feed Milk-Bank Feed Boosters by Kraft.

Pex products for poultry, Kaff-A Milk Replacer for calves, Kaff-A Booster Pellets for ruminants, Kraylets for swine, and Pace for horses. They're all made with milk by-products, rounded out with other vital nutrients. They produce faster, more economical gains, better health and resistance to stress, better productivity. And they do all this by adding the extra nutrition of milk by-products to the ration, and by unlocking more nutrition from the other elements in the ration.

Milk-Bank Feed Boosters are storehouses or banks for the key nutrients of milk: lactalbumin protein, milk sugar, vitamins, minerals and important growth factors—elements not found in ordinary grain rations, pasture, or roughage.

Write for details on feed programs with Milk-Bank Feed Boosters. KRAFT FOODS AGRICULTURAL DIVISION, 500 Peshtigo Court, Chicago 90, Illinois.

to pay more for it if it were published monthly.

I would like to make a suggestion. I think it should, like many other farm magazines, have a market forecast page. This way, Future Farmers would know when to sell their products.

Robert Youngken

How do other Future Farmers feel about a market forecast page? Let us hear from you on this and other suggestions for the betterment of your magazine.—Ed.

Raymondville, Texas

Enclosed you will find 39 names and addresses of Future Farmers who want *The National FUTURE FARMER* magazine in their homes. A check for same is also included.

I don't know how my subscriptions stand, so a check for $1.00 to extend my subscriptions is enclosed.

This magazine is very beneficial to me in my teaching.

W. H. Meischen
Advisor

Fayetteville, North Carolina

Enclosed is payment for Central FFA members. Since your first publication, Central Chapter has been 100 percent in subscribing to *The National FUTURE FARMER* magazine.

Each member enjoys the magazine very much and looks forward to receiving each individual copy.

Congratulations to the staff on a job well done.

W. S. Boyd
Advisor

P.S. We would like to hear from other FFA members throughout the nation as to their definition of a Drugstore Farmer?

We would, too!—Ed.

Akron, Iowa

As a father of an FFA member, I too enjoy reading your magazine. I would like to comment on a reader's remark about Mr. Charles B. Shuman in your December-January Reader Roundup.

Mr. Shuman represents the American Farm Bureau, an organization whose goals are legislation and education. When he speaks as president of the organization, he must represent our policy. Farm Bureau is nonpartisan, but its goals demand that it be political, so I can hardly see how his speeches could avoid politics.

FUTURE FARMERS:

Should you choose an occupation while still in high school? What are your thoughts on this subject? Your letters will be considered for the next Reader Roundup.

I don't believe your organization can develop young farmers if it completely ignores politics, as almost every farm decision today has to be made with the Government in mind, and many decisions almost entirely involve Government. To me politics should and does play as important a part in farming as planting and cultivating.

Gail Hemmingsen

Austin, Texas

I would like to commend you and your staff on the excellent job you do in editing and publishing *The National FUTURE FARMER* magazine. Also, I was most appreciative of the unique TV presentation of the National Convention activities. I always enjoy reading the Magazine.

Alton D. Ice
Executive Secretary, Texas Vo-Ag Teachers Assoc.

Leesburg, Ohio

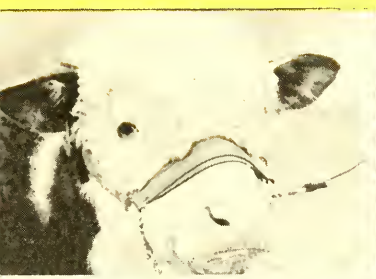
I would like to write to my fellow Future Farmers all over the world. I live on a small farm in Ohio and have always wanted to learn how other people in other nations farm. My chapter and I are waiting to hear from anyone who may wish to correspond with us.

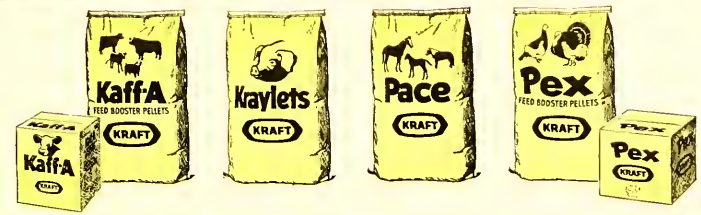
John Syferd

We'll tell Future Farmers to write you either at Fairfield High School or at R.F.D. 2, Leesburg, John.—Ed.

MILK-BANK BOOST

Milk by-product feed boosters by Kraft





KRAFT

. . . where better nutrition starts with milk

FOR THE SAME REASON YOU VACCINATE CATTLE

Successful farmers look upon vaccination as a sound investment in the protection of valuable herds.

They look at farm equipment lubrication in the same light. Because it is no place to cut quality corners, many use Kendall Lubricants. All are refined from the choicest 100% Pennsylvania Crude Oil. All pay off through the Economy of Kendall Quality. Less wear. Less need of repair. Important savings every month of the year.

USE KENDALL FARM LUBRICANTS

KENDALL MOTOR OILS

KENDALL REFINING COMPANY • BRADFORD, PENNA.
Lubrication Specialists Since 1881

Your Editors Say . . .

The first seven words of the FFA Creed are quite meaningful. To me, they alone describe the basic belief of the FFA. And with the many problems facing agriculture today, more people are needed who can say with conviction, "I believe in the future of farming . . ."

The long-range outlook for agriculture has some bright spots. There will be adjustments with the less efficient farmers being squeezed out. But for those who remain, it will mean more dollars shared by fewer farmers.

The growth in population is on the side of the farmer. With more mouths to feed, there will be an increased demand for farm products. This alone, however, will not guarantee success for any young man who chooses to stay on the farm. He must make plans to meet the increased competition that he will be facing.

What will this farmer of the future be like? His investment in farming will be much greater than it is today. He must plan to use more capital and credit, take a businessman's approach to farm management, replace labor with machinery, use more fertilizers, and newer and better ag chemicals. He must adopt the latest methods to increase efficiency in livestock and crop production.

Can you meet this challenge? The answer lies in how deeply you believe in the above words from the FFA Creed, and whether or not you can acquire the resources in land and capital. You have the start in your study of vocational agriculture and participation in the FFA. Know-how and leadership will be key words in the new era of agriculture.

In this issue you will find a new feature appearing for the second time in your Magazine. It is the four-page illustrated section on pages 42-45. This is an effort on the part of the editors to give you more variety for your reading pleasure. We believe too you will find these pages educational as they delve into various subjects related to agriculture. Some will contain information that will be helpful in your everyday life.

What do you think of this new feature? The editors would like to know. Tell us if you like it. Tell us if you don't like it. Either way, we would like to hear from you. And be sure to include any ideas you may have for subjects to be featured in future issues.

Congratulations to Wenroy Smith, the newly elected president of the National Vocational Agricultural Teachers' Association. Wenroy teaches agriculture in the Elders Ridge School District at Saltsburg, Pennsylvania. He has served as vice president of Region VI in the NVATA and was chairman of the FFA-NFA relations committee. His broad background and experience should serve him well in his leadership role for NVATA during the coming year.

Wilson Carnes, **Editor**

ARE PASTURES GOOD CONSERVATION?

Experts say YES...cite erosion-control values and PROFITS FROM GOOD GRASS COVER

Will food demands of the 70's trigger a plow-up campaign that brings on another dust bowl? Conservationists and practical farmers answer with an emphatic NO—even in face of a projected 30 percent increase in needs for meat and milk by 1975.

One reason for their belief is the knowledge that fully one-third of all U. S. farmland is best suited for permanent pasture, proved by Department of Agriculture Conservation Surveys.

Land Capability

Soil Scientists have mapped vast areas of the U. S. and classified the land according to recommended use. They call the maps Land Capability Maps. More than one-third of the area is CLASS VI (colored green)—"Best suited to permanent pasture."

CLASS VI land requires the protection of permanent grass to avoid serious erosion. But that isn't all. It produces more meat and milk when used for pasture than in any other use.

Erosion and Floods

The topsoil on this vital third of the land is usually very thin. When plowed-up, Class VI land is the makin's of nature's worst havoc—erosion and floods.

Pasture is the best protection—proved by thousands of conservation farmers. They have found good pastures not only nail down the topsoil and keep it productive, but produces big incomes on small investments. Where good sod covers the rolling hillsides, runoff is slowed, floods reduced, towns and lowlands are protected.

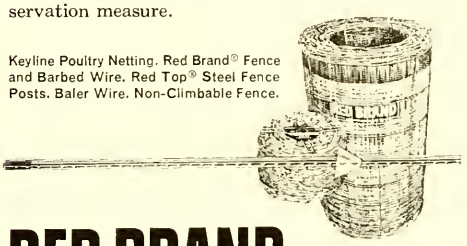
No other conservation measure can match the soil-saving ability of good pastures. Crop rotations with terraces are less than 10 percent as effective. Strip cropping and contouring give totally inadequate protection against erosion on most Class VI land.

Pasture Booklet—FREE

Valuable information about pasture improvement, utilization and management is available in a booklet published by Keystone Steel & Wire Company, Peoria, Illinois. The title is *Pasture—How to Reduce Feed Costs*. In it are reports from practical farmers and research scientists telling how to get good incomes from pastures. It is chock-full of money-making suggestions. Why not clip the coupon below and order your FREE COPY today?

Good fences make sound soil conservation easier and more effective. Thousands of practical farmers go so far as to say all Class VI land should be bounded by permanent fences. Their reasons are two-fold: To make the pasture land available for grazing at all times; and to form a permanent marker around land that is unsuited for cultivation.

When conservation farmers think of permanent fences, they just naturally think of RED BRAND® woven and barbed wire and RED TOP® steel posts. Only Red Brand fence is Galvannealed® to fight rust. That means Red Brand fences last longer, so they cost less in the long run—another good conservation measure.



Keyline Poultry Netting. Red Brand® Fence and Barbed Wire. Red Top® Steel Fence Posts. Baler Wire. Non-Climbable Fence.

RED BRAND

KEYSTONE STEEL & WIRE COMPANY
Peoria, Illinois

KEYSTONE STEEL & WIRE COMPANY—Peoria, Illinois

Please send me the FREE booklet *Pasture—How to Reduce Feed Costs*

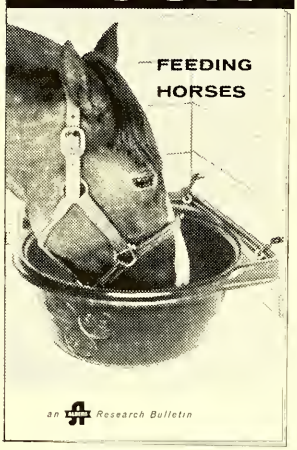
Name_____

Position_____

Address_____

City_____ State_____

FREE BOOK



ALL NEW! HOT OFF THE PRESSES!

This fact-filled booklet gives you newest facts on feeding horses for top performance. Plus a chart of common diseases – their causes, symptoms, treatment and prevention. Also grooming and management tips. You learn about Spur, too – the economical 25% protein concentrate that builds strong bones and muscle, fast fleshing. Write for your copy today!

Dept. YFF-13
Albers Milling Company
Division of Carnation Co.
1016 Central Street
Kansas City 5, Mo.

Spur

Please send me free 16-page booklet:
"Feeding Horses"

NAME _____

ADDRESS _____

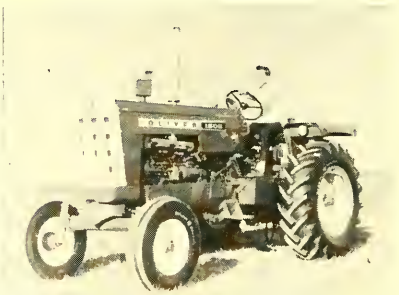
MY FEED DEALER IS _____

Kansas City's Hospitality Hotel

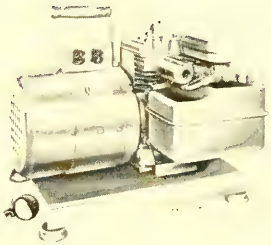
- Downtown—Heart of Theatre, Shopping and Business District
- 10 Minutes from Airport, Railroad
- 350 Air Conditioned Rooms
- Garage Next Door—24-Hour Service
- Year Round Swimming. Pool operated by K.C.A.C. and subject to its rules.

Something New

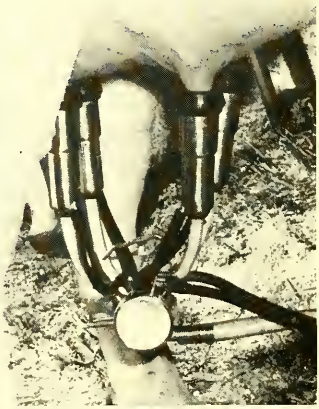
Air-driven pruner cuts time and work. (Miller-Robinson, L. A., Calif.)



All-new Oliver 1600 utility tractor has 60 PTO hp with 12 forward speeds, 4 reverse. One of 23 new products from Oliver Corp., Chicago, Ill.



Mobile 1,500-watt, engine-run generator. (Marlow Pumps, Midland Pk., N. J.)



Visi-Claw bowl shows when milk stops flowing. (Dari-Kool, Madison, Wis.)

Space heater for portable use. Burns oil. (Champion Heater Co., St. Louis)

New chain saw can be converted to direct or gear drive. (Homelite, Pt. Chester, N. Y.)

Series III D-17 tractor for 4-plow class. Row-crop refinements, 54.3 hp. (Allis-Chalmers)

Start the season with the spark plug that's SPECIFICALLY DESIGNED for farm tractors!

1. **SPECIFICALLY DESIGNED** to reduce flashover, eliminate misfiring and in turn save fuel. AC's Buttress-Top Insulator is the reason. Larger, huskier, tougher, AC's new extra-strength insulator is also designed to prevent installation breakage, withstand the heaviest use.

2. **SPECIFICALLY DESIGNED** to effectively retard rust and corrosion because water and moisture will not penetrate AC's New Nickel-Plated Heavy-Duty Shell.

3. **SPECIFICALLY DESIGNED** to deliver reliable ignition and power during extra-heavy and extra-long work periods. That's because AC's New Self-Cleaning Hot Tip heats faster to burn away fouling deposits as they form, cools faster to discourage pre-ignition.

4. **SPECIFICALLY DESIGNED** to deliver greater sparking ability, maximum gas economy. AC's New Knurled Center Electrode ignites combustion gases more easily, eliminating possible wasted power, wasted fuel.

These are just a few of the reasons ACs are fast becoming the favorite of farmers who put quality first. The only spark plug on the market *designed specifically for farm tractors and implements,* AC Farm Tractor Heavy-Duty Spark Plugs also feature pressurized internal construction, fused center seals, welded side electrodes and many other additional engineering advances—*all* designed to give you fast starts, top fuel economy, maximum engine power. Start the season right . . . get AC Farm Tractor Spark Plugs from your Farm Implement Dealer today!

AC

FARM TRACTOR
HEAVY-DUTY
SPARK PLUG

AC SPARK PLUG THE ELECTRONICS DIVISION OF GENERAL MOTORS

New B.F.Goodrich Farm Service Plan: this is what it can mean to farmers.

A message from Ward Keener, President, The B.F.Goodrich Company.

"As an individual I have long been interested in farming and particularly in young farmers, and I am happy to serve as chairman of the FFA Foundation Sponsoring Committee. Our Company is also deeply interested in the farm industry. Through the past year we have developed plans to improve our service in ways which we feel will be of direct value. These plans are of great personal interest to me, and I'd like to tell you about them.

"**1. New and improved farm services.** BFG stores and dealers will make tires and tire know-how available to you. They're ready to help your farm program every way they can. They also offer farmers free loaner tires and on-the-farm service.

"**2. More service points to help you.** We've developed a new network of B.F.Goodrich Farm Tire Service Centers to provide the most complete, most efficient service obtainable. And we've assigned a squad of Farm Tire Supervisors to make sure these centers have the tires and facilities to help make farming more efficient and more profitable.

"**3. Better tires.** Our experts are continuously at work on new cords and new rubber compounds. Their goal: to build farm tires that will be stronger and last longer than ever before. The BFG nylon cord construction in Power-Grip tires is an example of this. Pound for pound it's stronger than steel. Farmers get nylon protection and top traction—both at a low price.

"Thousands of new tractors and farm implements come equipped with BFG tires. We want every user of BFG tires and every local FFA chapter to have the right help and service close at hand. If there's any way you think our service or products can be improved, won't you write me at *The B.F.Goodrich Company, Akron 18, Ohio.*"

B.F.Goodrich

PILOT BRAND Oyster Shell is almost pure calcium carbonate. Taken free choice, it maintains adequate calcium levels without reducing the energy value of the feed. Thus, this ideal eggshell material helps you get more eggs with stronger shells—helps promote the health of all poultry. It pays to keep PILOT BRAND Oyster Shell before *all* of your chickens, *all* of the time.

PILOT OYSTER SHELL

In the bag with the big blue Pilot Wheel—at most good feed dealers.

For Poultry

Oyster Shell Products Company

Mobile, Alabama

WELDER SAVES BREAKDOWN LOSSES

Stop those costly, profit-wasting trips to town to replace broken parts. Repair your own equipment and save money with a low-cost Lincoln 180-amp welder. And this winter, build time-saving new tools and equipment for increased profits next year.

Machine welds, brazes, hardsurfaces, cuts metal, thaws frozen pipes. Furnished complete with headshield, electrode holder, sample electrodes, ground clamp, cables . . . nothing else to buy. Only $125.00 complete. For full information, see your local Lincoln dealer, or,

SEND COUPON NOW **LINCOLN WELDERS**

The Lincoln Electric Company
Dept. 4813
Cleveland 17, Ohio

Please send me bulletin on Lincoln 180-amp AC Welder. I understand there is no obligation.

Name_____

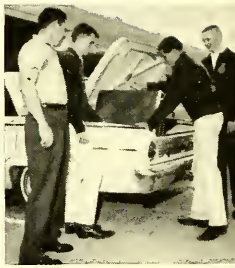
Street & No._____

City_____ RFD No._____ State_____

A chat at the capitol with Missouri Governor, John Dalton. From left, James Evans, Missouri Farmers Association; Jack Chapman; Jim Faubion; and Jim Reagan.

CHAPTER TO CHAPTER

Advisor Jack Lacy sees the trio off at Lampasas Chapter.



STUDENT EXCHANGE

FUTURE Farmers in Unionville, Missouri, have become old friends to three members of the Lampasas, Texas, Chapter, 750 miles to the south. Jim Faubion, Jack Chapman, and Jim Reagan, all three hard-riding Texans, were part of an FFA exchange program not unlike exchange plans conducted on an international scale for many years.

Originator of the program is amiable Jack Lacy, advisor at Lampasas, a cattle town 60 miles north of Austin, Texas. Because agriculture varies in different sections of the country, Lacy decided it would be good training to send some of his students to another agricultural area on an exchange basis. His plan became a reality in the spring of 1961, when several students visited another chapter in Nebraska.

So successful was this venture that Advisor Lacy decided to put the program on permanent footing. He got in contact with the chapter at Unionville, Missouri, situated in an important feeder calf and feed grain area five miles south of the Iowa border. The feeder calf sale held there each fall would provide good training for FFA members, Lacy thought. Plans were confirmed with Unionville Advisor John Mowrer, and homes of Future Farmers were delegated as hosts. The three Texans then arrived on the morning of October 7 for a full week of activities.

After church in Unionville that Sunday, the Texans traveled to the homes of their hosts, the same three boys who will visit Lampasas next month. Early Monday morning, the exchange students helped open the FFA food stand at the Unionville feeder calf sale. The Texas Future Farmers were told that nearly 12,000 feeder calves were consigned to the week-long sale.

Back to classes at Unionville High School in the afternoon and on Tuesday morning, then out to the sale again. Wednesday morning the Texans accompanied Unionville's Jim Newell to the National FFA Convention to receive his American Farmer Degree. Again on the road, and a trip to the state capitol at Columbia for a visit with Missouri Governor John Dalton. Then back to Unionville.

Friday was spent touring livestock farms around Unionville before getting ready to go again to Kansas City for the American Royal Parade and home.

To return the chapter's hospitality, Unionville Future Farmers Wayne Fowler, Ed Hazelwood, and Delbert Shelton will leave the middle of March for a week with the Lampasas Chapter.

Advisor Jack Lacy passes along these tips to other chapters who may want to follow in his footsteps:

1. Select an outstanding vo-ag department in another state.
2. Select students with strong scholastic and leadership abilities.
3. Plan every day's activities down to the last detail.
4. Inform the parents of the activities and intentions of the program.
5. Contact local banks, civic organizations, or commercial firms to sponsor each exchange student.

"I think this is the finest program I have seen for motivating students in their FFA work and for getting public interest in the local chapter," Advisor Lacy told us. "The program takes a lot of time and work but pays off handsomely."

WHY IS SMITH-DOUGLASS FERTILIZER BETTER?

Take trace elements, for instance.

ZINC
CHLORINE
NITROGEN
HYDROGEN
OXYGEN
IRON
CARBON
MANGANESE
MOLYBDENUM
MAGNESIUM
PHOSPHORUS
BORON
CALCIUM
SULFUR
POTASSIUM
COPPER

With every bushel of grain and every head of livestock that leave the farm, not only are nitrogen, phosphate and potash removed, but secondary and trace elements are also removed.

In the push for higher yields, trace elements are more likely to become a limiting factor. Land that has been cropped for many years without adding any trace elements is even more likely to show deficiencies.

There are 16 known essential nutrients needed for plant growth and reproduction. Of these, 13 must be supplied from the soil and 3 from air and water.

Smith-Douglass' exclusive trace element formula, TREL, is added to every ton of Smith-Douglass premium fertilizer. TREL is an exclusive registered formula of the Smith-Douglass Company, containing all trace elements . . . and added only to Smith-Douglass fertilizer.

NO. 1 OF A SERIES

You never lose when you choose Smith-Douglass fertilizer . . . with TREL.

SMITH-DOUGLASS

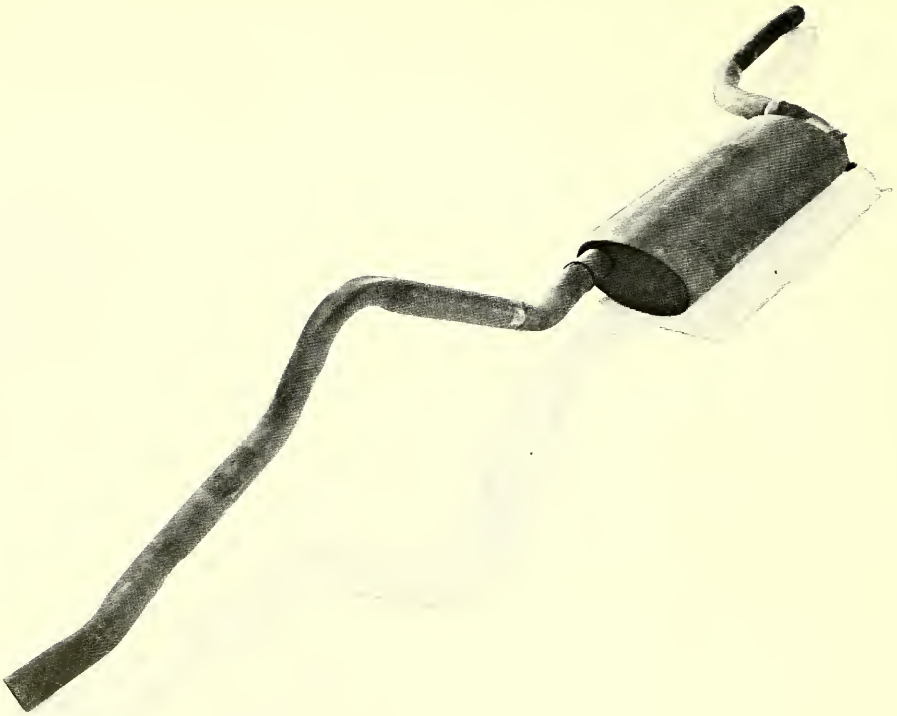
HOME OFFICE: NORFOLK, VIRGINIA

Smith-Douglass Co., Inc. manufactures and distributes fertilizers and chemicals for agricultural and industrial use, including sulphuric acid, anhydrous ammonia, phosphoric acid, nitrogenous tankage, phosphate rock, superphosphate, farm fertilizers, lawn and garden fertilizers, feed phosphorous supplements . . . dicalcium phosphate and defluorinated phosphate . . . potassium silicofluoride and potassium fluaborate.

SMITH-DOUGLASS FUTURE FARMER OF THE MONTH

Denny Ray Wilson
Monroe Chapter
Monroe, Iowa

Denny is attending Iowa State University with the assistance of a Smith-Douglass scholarship. He is a winner of the Iowa Gold Award for the FFA Parliamentary Procedure Contest and plans to make agricultural research his career.



We helped break America's smoking habit

Remember when engines used to begin smoking at a very early age...burning oil because the rings were shot?

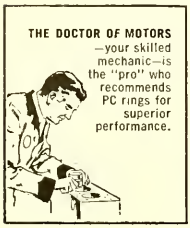
Today, piston rings last better than twice as long—thanks to a great extent to a number of Perfect Circle patents. Our research has helped change the piston ring from a simple casting to a carefully-engineered part that's made with the precision of a fine watch. And it's also brought us a lot of customers we're proud of.

Practically all vehicle and engine manufacturers in America install Perfect Circle piston rings as original factory equipment. And you'll find similar preference for Perfect Circle in everything from tractors to diesel locomotives. In all, 95 brands of vehicles and engines use our rings.

One of the most convincing examples of the performance, dependability and economical operation provided by PC rings is the fact that more award-winning* truck and bus fleets use Perfect Circle rings exclusively than any other piston ring brand. This was true in '62, as it has been year after year.

These are the same efficient piston rings you'll have in *your* farm engines when, next time you re-ring, you insist on rings made by Perfect Circle!

Fleet Owner Maintenance Efficiency Awards



PERFECT CIRCLE

Piston Rings • Cylinder Liners • Precision Castings • Turbine Blades and Wheels Electronic Programing Equipment • Speed Controls • Hagerstown, Indiana

Plants and Subsidiaries: HAGERSTOWN, RICHMOND, NEW CASTLE, TIPTON AND RUSHVILLE, INDIANA THE PERFECT CIRCLE COMPANY, LTD., DON MILLS, ONTARIO, CANADA • SCHELLENS TRUE CORPORATION, IVORYTON, CONNECTICUT • PERFECT CIRCLE INTERNATIONAL, FT. WAYNE, INDIANA • PERFECT CIRCLE HOLLAND N.V., THE HAGUE, NETHERLANDS • Factories, Affiliates and Licensees in MEXICO, ARGENTINA, AUSTRALIA, BRAZIL AND FRANCE

KENNY MC MILLAN DAY

By Paul Weller

By special proclamation of the governor, all citizens of Illinois were urged to observe November 26, 1962, as Kenny McMillan Day!

FOR WEEKS before November 26 the small prairie town of Bushnell, Illinois, had an air of excitement and expectancy. It seemed as if all of its 3,800 citizens were involved in some way in what was to come. And on a 520-acre farm six miles south of neighboring Prairie City, 20-year-old Kenny McMillan, newly elected president of the FFA, was most excited of all.

Down in the state capitol, Springfield, Governor Otto Kerner had proclaimed November 26, 1962, as "Kenny McMillan Day" and would be the featured speaker at a day-long program in Bushnell. And notables from all sections of Illinois were planning to attend the important affair. Governor Kerner's personal proclamation lauding Kenny's splendid record in both FFA and college, as well as his outstanding personal qualities, was to be distributed virtually nationwide.

The gymnasium of Bushnell-Prairie City High School was filled by 10:30 on the morning of the big day as Governor Kerner's limousine pullled up outside. Inside, as the high school band announced the governor's arrival, a distinguished local osteopath, Dr. Harold Fitch, mounted the platform as master of ceremonies. Officers of the Illinois FFA Association nearly surrounded their new national president on the small platform.

Governor Kerner talked on "the boy I first met down at the State Fair." Then stressing the importance of FFA to the nation, he told the assembled crowd that he personally hoped the FFA could encourage more young people to enter farming.

Then he turned to the Future Farmers scattered throughout the crowd and told them, "I charge you to wear the blue uniform jacket of your organization with pride. There is no more distinctive garment you could choose which would attest to the finest standards of American youth."

With ceremonies at the high school at an end, Kenny gathered up the watch with the distinguished service plaque from the Illinois FFA Association and accompanied his parents and family members across town to the recreation center for a noon luncheon.

It seemed as if all of McDonough County tried to fit into the second-floor banquet room. There were state legislators, FFA members and officials, newsmen, and even Kenny's rural mailman among the 250 people in attendance. William Thornton, Kenny's former vo-ag instructor, shared the head table as the new national FFA president humbly accepted the multitude of honors his community was heaping upon him.

"You are honoring Bushnell, Prairie City, and all of American agriculture," Congressman Paul Findley told the group. Editor Mauriee White of the *McDonough Democrat* expressed the community's pride further by presenting Kenny with a monetary grant for his education at the University of Illinois. Watching attentively from the group were representatives from 18 Illinois FFA chapters who came to pay their respects.

The official party! State FFA President Gary Ludwig, Gov. Kerner, and Kenny.

Roland Runkle, engineer at the local high school, expressed the sentiment of the local citizens when he told us privately, "We've all known Kenny for a long time, but we never thought this quiet boy would go so far so quickly." And when the program came to an end, it was School Board President Hummel's remark, "Seldom is our community honored as it is today," that found a lasting place in everyone's heart.

Fender's Future In Forestry

By Paul Weller

IN A STATE that ranks as the South's top producer of raw wood materials, a lone Future Farmer continues to gain momentum and awards in forestry. He's Danny Fender, an ambitious 18-year-old from Lakeland, Georgia, who has attracted the attention of many by winning both the Georgia FFA Forestry Prize and the National FFA Foundation Award this past summer.

Talking with the slim Georgian, one can sense that his road to national honors was not easy; nor was it sparkled with the easy success that often comes to the son of a large landowner. Today you can travel southwest of Waycross to Lakeland, right smack in the middle of the pulpwood country—then ask about Danny Fender. Any lumber dealer will tell you his 1,400 acres starts near town, then spills over into neighboring Berrien and Clinch counties. They'll tell you more if you have time to listen.

Last year with Danny a busy senior in high school, his father passed away leaving him with the major responsibility for 1,200 acres of woodland. Many would have stumbled, given up school, or even sold out. Danny did just the opposite by enrolling this year at Mercer University and expanding his forestry enterprise.

What lay behind Danny's decision to continue and expand? "My FFA advisor, Mr. Keene, took an interest in me and worked with the management plans," Danny explained to us. Also quite apparent was his father's influence over the past 10 years to develop and work out a good woodland management plan for him to eventually take over. "He would turn over 20 or 30 acres at a time for me to manage," Danny continued. But also clear was an unusual drive to excel that sent him time and again to neighboring lumbermen and dealers to study their needs and practices. His outstanding forestry work in vo-ag came a great deal from after-school dedication.

Over the past four years Danny has planted nearly 125,000 slash pine seedlings in open areas of the farm. Since much of the woodland was naturally seeded and all sizes of trees grow there, it has been necessary for him to thin and rid the land of diseased and undesirable trees.

"It's a year-'round job," he told us at our initial meeting. This was apparent as he began to explain the many operations to produce a profitable woodland project. "We begin to do selective cupping in December," he told us. He was referring to grooving specially picked trees in preparation for collecting rosin for naval stores. His trees are then worked for this purpose for from five to seven years.

Then as winter progresses, Danny and his full-time hired man burn controlled areas as a precaution against fungus diseases. Trash and undesirable weeds make good harboring places for disease organisms, he told us. Neither is it uncommon to see the tall Future Farmer going through his wood lots with a gasoline-driven brush saw to clear around selected trees. The residue is then also burned with the trash and weeds.

When summer comes, Danny is on the job full-time again to supervise timber operations by the three local lumber dealers who contract his trees. Summer is also time to plow more firebreaks through the wooded areas and paint out the boundaries separating each forestry plot. Often it becomes necessary to treat the naval store trees for the pesky black turpentine beetles that are a nuisance in the South. And above all, summer is time for more treks through the woods to thin out and control hardwoods.

Last year he sent 232 cords of pulpwood, 2,700 board feet of saw logs, and nearly 8,000 fence posts off the farm. He makes sure each transaction is covered with the proper marketing contract.

Needless to say, Danny owes much to his father's profound interest in the land and Advisor Keene's guidance in technical forestry management. But his self-confidence and unending ambition are products of his own making and should contribute greatly to his success with his forest products.

◆◆◆

How many board feet? Danny estimates timber by the sight method.

Playing a major part in Danny's success has been vo-ag advisor, W. H. Keene. Here they plant slash pine seedlings, part of 125,000 in the past four years.

Planning Student Loans

By
James B. Willis

Before applying for a farm loan, you must plan your enterprise. A loan officer tells how.

THE REASON my bank has participated in financing FFA farming programs for the past 12 or 15 years is twofold. First, each branch of the bank derives its profits from the community. It is indebted to that community, owing services in return.

Secondly, the FFA credit program brings in new and better customers—better customers because of the training they receive while preparing for and securing the loan and then observing the services of the bank loan officer. A customer who has participated in the youth loan program is usually better informed and can use more services of the bank.

Most banks prefer that each FFA chapter appoint a committee to consider and judge all loan applications before they reach the bank. However, there are many chapters where the loan applicant deals directly with the loan officer at the bank. Regardless, each Future Farmer is required to complete an application for a loan plus an agreement signed by the applicant, his parents, and the vo-ag teacher.

The parents agree that the project is worthwhile, that they will assist in making the project a success, and that they will join in the responsibility by signing the note. The vo-ag teacher indicates that the student is worthy of the loan and agrees to supervise the program. He, of course, assumes no financial liability.

Detailed budgets and a repayment schedule are completed and submitted along with the application to the loan officer at the time of the interview. The interview, particularly for the first loan, will be both lengthy and detailed.

Whether or not you will get credit is based on the bank's belief in your willingness and ability to repay according to its terms. Since the bank has little past experience to base your credit rating on, you must thoroughly plan your enterprise to convince the loan officer that he should lend you the amount requested.

Since the majority of our youth loans are to finance livestock, let's briefly consider the lending policies for this type of loan. There are no fixed margin requirements on youth loans as against regular livestock loans. When a Future Farmer applies for a loan to finance his first animal enterprise, the total purchase price plus the cost of feed can be financed. However, if more than one animal is involved, he is usually required to have some cash, other livestock, or feed on hand.

The profits from each enterprise should be reinvested in the farming program to enable you to build up a larger equity. Your goal should be to build your livestock enterprise from the original 100 percent loan to one with the normal percentage for an adult borrower. The policy of most banks is to loan a maximum of 65 to 75 percent on livestock with the borrower providing the remainder either in cash, livestock, or stored feed.

Crop enterprises are not as popular as livestock with Future Farmers in this area. In recent years we have switched from the policy of lending a fixed amount per acre to the use of a detailed budget. As in the livestock loan, you would be expected to have some small investment in the crop in addition to the land and equipment. The major difference in lending money to Future Farmers for crop enterprises is that a secondary source of repayment is not required when the enterprise is sound.

The author, James B. Willis, is a former vo-ag instructor and acting Arizona state FFA supervisor. He is now a bank loan officer in Yuma, Arizona.

Regular loans to adult farmers require a secondary collateral (additional security) because crop financing is considered a high-risk type of loan. The money is used for land preparation, fertilizer, and seed before the crop is even out of the ground, much less grown and sold. In case of crop failure it would be hard to pay back the loan.

Production loans are essential to modern farming. They can be easily obtained if you plan your programs well, meet your obligations, and work closely with your banker. There is an old saying that there are two people from whom a man should keep no secrets—one is his wife; the other is his banker.

RURAL RECREATION . . .

A New Farm Crop

THERE'S a new cash crop awaiting harvest in the fields of hundreds of farmers across the country! Rural recreation on a pay basis is offering a new source of income.

The whole idea started last year when Secretary Freeman's Rural Area Development Committee reviewed reports showing a mass exodus from low-income rural areas. As a result, many rural areas were losing much-needed revenue. And yet, Americans massed in ever-growing cities were willing to spend a record 20 billion dollars a year for recreation.

Secretary Freeman's advisors made a study showing that 51 million fewer acres will be needed for crop production by 1980. So, long-term changes of land use from crops to wildlife sanctuaries and income-producing recreation areas became a big part of the USDA's plan. This past fall, more than 10,000 rural leaders were polled when Freeman took his plans on a nationwide trip via five regional Land and People Conferences.

These plans are just beginning, but they will influence every Future Farmer planning to enter farming. Here's the income-stimulating rural recreation story as it will apply to farmers:

America's farms and ranches offer almost every kind of recreational opportunity associated with the out-of-doors. As the demand from city folks for recreation increases with more leisure time, farmers can add to their incomes substantially by improving and expanding facilities right on the home farm.

Farmers have made unproductive marginal land into hunting camps by leasing adjoining woodland, then charging either a daily fee or leasing the area to sportsmen's clubs for extended periods of time.

One farmer has 10 bait fish ponds in what was once a poor pasture. Another operates a commercial duck hunting club as part of his dairy farm. He has 660 acres of pasture developed into a waterfowl habitat. On it he built 27 blinds, which he leases to hunters for $10 a day.

A dairy farmer in Pennsylvania found his dairy wasn't paying, so he built a retail snack bar. When business got slow in the winter, he built a bowling alley to bring in customers. Then he sold choice lots when land prices went up. Finally, he built a golf course complete with miniature golf facilities and now has a good supplemental income.

Local farmers in Vermont combined efforts to convert a wilderness mountain into one of the top skiing areas of the world. More than 10,000 skiers daily in wintertime bring revenue not only to the developers but to farm families in the area who rent rooms and serve meals.

Still another farmer near a large city turned his farm into a camp where both children and adults can stay a day or a week. He has picnic areas and two ponds for fishing and boating and furnishes horses for trail riding.

Many hundreds of farm families are now offering rooms for city dwellers. In fact, a commercial company publishes a directory with nearly 150 farms and ranches offering rooms and board to persons seeking the quiet of country life. Provisions vary from the normal farm routine to elaborate movies, outdoor games, and taxi service.

Farm families across the country have invested varying amounts of money in recreational areas to supplement their farm income. And projects vary according to the region and the customer's preference.

When ice skating became unreliable, an eastern farmer turned his vacant barn into an ice skating rink with the stable area converted for parties. Another landlocked Midwest farmer built an 11-acre pond with SCS help, then hauled sand in to make a beach. He now charges fees for bathers.

Can you make that back 150 acres

Controlled hunting on 250 acres of privately stocked Maryland farmland.

The honor system has worked at the entrance to this Arkansas farm pond.

Recreation adapted to farms

- **Vacation farms**
- **Picnicking and sports areas**
- **Fishing waters**
- **Camping, scenery, and nature recreation areas**
- **Hunting areas**
- **Hunting preserves**
- **Selling recreation land or rights**

Where you can get help
(All not available in some areas)

- **Extension Service**
- **Soil Conservation Service**
- **Farmers Home Administration**
- **Forest Service**
- **Agricultural Stabilization and Conservation Service**
- **Fish and Wildlife Service**
- **Experiment stations**
- **Recreation associations**

A stringer of beauties from a farm pond that was once rundown pasture.

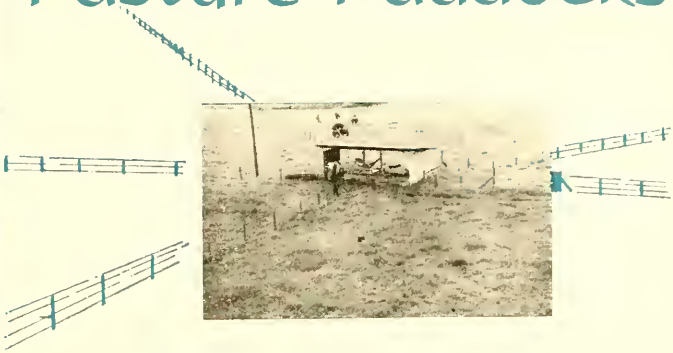
Swimming in summer, ice skating in winter from this Pennsylvania pond.
USDA Photos

into a money-maker? We can't say for sure, but here's what you can do. Go to your local advisor and go over your farm potential and the community's needs. Maybe you can get some local leaders together or other farmers for their advice.

The Farmers Home Administration makes loans to farmers to finance recreational enterprises. Each loan is scheduled for repayment within a period consistent with the farmer's ability to repay. The maximum is $60,000 at 5 percent interest with up to 40 years to repay. Loans to help farmers operate their recreational areas are also available with a shorter time for repayment. The government will even furnish technical planners free of charge.

The challenge is yours! Sit down this evening and evaluate your farm to see if there's a possibility for rural recreation. The USDA has a wealth of information free for the asking to help you develop anything from campsites to ski slopes.

the story of PAHOA's Pasture Paddocks



Raise nine cattle on four acres of pasture without feed supplement? Pahoa's Future Farmers are already doing it.

By Kougo Kimura

PAHOA High School's vocational agriculture department, located on the big island of the Hawaiian chain, is making money from grass. Grass, that is, from four acres of pasture that grazing cattle change into beef.

It's not so incredible that grass is turned into money, but that it is accomplished by raising nine head of cattle on the four acres. And Pahoa's Future Farmers are proving that it can be done by using the right kind of management practices.

Should one visit the farm located at the rear of the school, he would see a neatly fenced pasture divided into five sections or paddocks. Each paddock has access to a central feeding shed that serves as a hub from which the dividing fences radiate. In a single paddock of the five-segment pasture will be found nine heifers and steers of varying ages.

Rotation is the basis of this grazing setup. With cattle being allowed four to seven days per paddock, each paddock gets 16 days' to a month's rest between grazings. This is a key factor in the increased carrying capacity of the school pasture.

The four acres support nine head without benefit of commercial feed. Use of the central "feeding shed" is limited to supplying cattle with fresh water and mineralized salt.

Principal pasture grasses include Panicum repens, Pangola, Paspalum grass, Birdsfoot trefoil, and Kaimi clover. The grass is kept nutritious by regularly mowing and fertilizing each paddock soon after the cattle have been removed. Fertilization about twice a year has been found to give good results. Formulations already tried include 10-10-5, 14-14-14, 10-10-10, and 17-17-10.

Six-month-old weaned calves purchased from a nearby ranch stock the project. They are marketed after 18 to 24 months of rotation grazing.

Small ranches similar to Pahoa School's may be suitable for part-time operation by more people. After initial investment and labor, it would require a minimum of time and operating expense.

This type of small and intensive ranching can be made successful with the following practices:

1. Set up at least five paddocks to provide a month's recovery period for each.
2. Plant several adaptable grasses and legumes.
3. Fertilize and mow grasses occasionally.
4. Provide adequate fresh water and salt centrally accessible.

◆◆◆

By Maynard Coe

Home Farm Shops . . . MAKE 'EM SAFE!

THE REAL challenge in efficient farm operation today is to minimize depreciation on machinery and equipment. For this reason, a good farm shop has become almost a necessity. And going along with the well-equipped shop, we must have safety.

A shop of adequate size for farm service will help promote safety. Some agricultural engineers are recommending a basic size of 30- by 30-feet, built to be lengthened when necessary. It should include space for orderly arrangement of tools, benches, plus a heating unit. Sufficient window area for good ventilation is very important.

Artificial lighting with a ceiling lamp every 200 square feet gives best illumination, while an electrical outlet for every eight feet of workbench helps prevent tangled wires. The shop should include strategically located service outlets for both 110- and 220-volt power equipment with three-prong receptacles for proper grounding. Make sure your ground is connected at all times.

Arrangement of the shop service area is of great importance for safety. Two workbenches are desirable, one for woodworking and the other for metalworking. Each should be from six to 10 feet in length, two feet in width, and have a smooth working surface. Make sure the benches are located at safe distances from installed power equipment.

A metal roll-away rack or table mounted on three-inch casters can be used to bring tools and supplies within safe and easy working distance. This rack should be of such dimension that it can be stored under one of the benches when not in use. Check before installing power equipment to make sure there will be no interference with other tools when in use.

Safety dictates placing a metal container for collection of junk. Vertical racks should be included for storing extra iron and steel for repair jobs. Lumber can be stored in the same manner in the woodworking area of the shop.

A suitable plan for storing nails, bolts, screws, and other small items is the use of properly labeled glass jars placed where needed. Hand tools should be kept in cabinets mounted on the walls, each cabinet providing space for a particular class of tools. A desk or file will give ample room for storing records, catalogs, and machine instructions.

Basically, a concrete floor will eliminate many hazards. Ample fire extinguishers mounted shoulder high on the walls in areas where the greatest fire hazards exist are next in line. Any flammable liquid should be kept in tightly covered containers located well away from danger spots. Oily rags should be placed in covered metal containers.

Many shop workers don't dress properly. They wear loose clothing and ties, and their sleeves are not rolled to the elbow. Many students use files without handles, chisels with mushroom heads, clean or oil machines in motion, and use hammers with cracked handles. One of the most frequent violations of safety is the use of power saws without proper guards. All too often, goggles are not worn when they are readily available.

Every shop needs a definite program of safety. Some general rules to follow for shop safety are these:

(1) Practice good shop housekeeping.
(2) Remove obstructions from work spaces.
(3) Keep benches and tools clean and in good order.
(4) Have a place for everything, and keep everything in its place.
(5) Dispose of rubbish.
(6) Keep floors clean and free from spilled oil or grease.

Self-protection is also very important. These few pointers can increase safety a great deal:

(1) Wear appropriate clothing. Avoid loose-fitting or ragged material. Remove your tie and roll your sleeves to the elbow. Protective gloves and goggles should be worn.

(2) Keep tools in good working order, guards on belts and gears, and blocks under any equipment that is to be worked under.

(3) Be attentive. Don't let your attention be diverted from your job. If visitors arrive, stop your work and shut off the machine.

(4) Guard against fumes. Do not operate an engine in a closed shop unless the exhaust is piped outside. Avoid breathing fumes.

(5) Prevent fire hazards. Limit the amount of gasoline to small quantities in closed cans. Put oily rags in closed metal containers. Shield flammable walls with metal or asbestos board, and keep pails of sand to extinguish grease fires.

(6) Keep a first-aid kit handy, and use it with even the most minor accidents.

(7) Avoid hurry. Plan your work to have ample time for completion within the allotted time.

Remember, safety depends on you! You must believe in it and treat it as something more than another requirement. It takes only one accident to maim even the healthiest Future Farmer for life.

Young leaders in agriculture and successful leaders in business bridge the gap between farm and city with a firm handclasp each year in Birmingham, Alabama. The "Magic City" rolls out its red carpet and unveils its industrial showpower for a group of Future Farmers during National FFA Week.

ALABAMA
FUTURE FARMERS

Out on the Town

THE FUTURE FARMERS—one from each of Alabama's 67 counties—state officers, and entertainment groups are guests of the Agriculture Committee of the Birmingham Chamber of Commerce. Other groups, however, do sponsor some of the activities.

The two-day visit was started in 1950 at the suggestion of the Chamber of Commerce's J. A. Beaty. Each year the FFA gains more friends and supporters, and Birmingham is impressed with the Future Farmers they meet.

The whirlwind begins with registration. Hardly is the register signed before buses arrive at the hotel for a tour to such points as the largest research center in the Southeast; the Vulcan, second largest metal statue in the country; and the expansive "Farmers' Market" where produce arrives for distribution throughout the city.

The first day ends with a banquet at the Alabama State Fairgrounds. Here city officials, business leaders, and Chamber of Commerce members meet the Future Farmers. The "key to the city" is presented to the state president and is symbolic of the esteem Birmingham holds for the FFA.

Next day, after an early (for city folks, that is) 6:30 a. m. breakfast, the FFA members take a three-hour tour of Birmingham's largest industry, steelmaking. They follow ton-heavy, white-hot steel chunks from the "holding pit" through the roller mills to a finished product.

Then it's back to the hotel, a rush packing before the final luncheon, and the end of the tour. The schedule is organized to use every minute of time, but yet it is kept informal enough for Future Farmers to enjoy themselves.

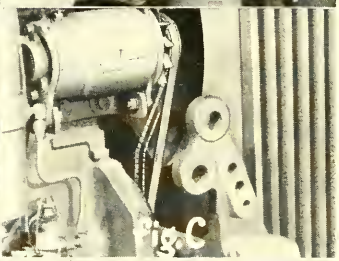
When the last Future Farmer has left for home, he leaves with the people of Birmingham the memory of a young man standing on his own abilities and looking the challenge of the world squarely in the eye.

After 13 years, State Advisor T. L. Faulkner sums up the two-day visit this way: "These meetings are contributing to a better understanding and working relationship between rural and urban Alabama."

Jimmy Barnes, 1962 state president, tries Mayor Hanes's chair. Looking on are T. L. Faulkner and W. D. Alston.

Then out to spend a few hours touring Birmingham's steel industry . . . and see white-hot steel from the ovens become a finished product ready for industry.

Prevent Trouble with a Tractor Check-up



By Melvin E. Long

Here are 12 important items every tractor owner should service now!

EVER HAVE a tractor come to a screeching halt or fail to function in the middle of your busiest spring work? Ever wonder why it happened? Carefully check your tractor now, and you can avoid many of these delays. In many instances, your time will be the only investment required.

Here are an even dozen items that you should check. Some will require only a quick look; others may take a little longer.

1. Crankcase—Drain out the thin winter oil and replace with a heavier summer weight. Do this when the engine has been thoroughly warmed. If your tractor has a filter (Fig. A), replace it, too.

2. Transmission—Check the oil level. If the owner's manual recommends a heavier lubricant for spring and summer use, change it now. Otherwise, add oil, if required, to bring it up to the proper level.

If the lubricant in the transmission case is above the check plug, this may be a warning of trouble ahead. On some tractors, oil leaking from the hydraulic systems enters the transmission case. So, if the transmission case seems to be "gaining" oil, it will pay you to have your serviceman investigate for leaky seals and gaskets.

3. Hydraulic system—Most hydraulic systems should be drained and refilled with new oil at least twice a year. This gets rid of dirt particles in the oil and water formed by condensation. Be sure to refill with the correct weight oil before starting the engine.

Never attempt to economize by using used crankcase oil in your hydraulic system. This will only lead to a complete overhaul of the hydraulic system. The cost of one overhaul job will buy new oil for the hydraulic system for the life of your tractor.

4. Steering gear—Check the level of the lubricant in the steering gear case. If needed, add oil to bring it up to the recommended level. In most tractors it is not necessary to drain the present oil.

5. Radiator—To cool the water, air must pass freely through the radiator core. To insure this, remove the grill and any front screens and blow out dust, dirt, and trash from the back side. You can use an air gun, water hose, or even a hand tire pump.

With the engine thoroughly warmed, check for leaks at the radiator top tank, bottom tank, and in the core. Also check the water pump shaft for signs of leakage around the seals. Repair of these leaks is a job for your dealer or a radiator repair shop.

Next, drain the radiator. If the antifreeze solution looks rusty, it's best to discard it. You will probably need to clean the rust out of the cooling system with a solution of soda and water. After filling the system with this solution, run the engine long enough for it to reach normal operating temperature. Drain and flush several times with clean water. Run the engine each time to get complete circulation. Then add some rust inhibitor to the final filling.

6. Fan belt—(Fig. C) Check the fan belt for condition and tension. Look at the underside. Breaks generally start there. A loose belt will slip and prevent the cooling system from doing its job properly.

7. Battery—Be sure the liquid is at the proper level. Check this at least once a week during the busy season. If the level is low, add soft water. Clean up any corrosion on the terminals or the top of the battery. Be sure that the terminal clamps are tight; then coat lightly with vaseline. Operation of the tractor over rough ground will jostle the battery enough to break the case if it is not adequately secured.

8. Clutch and brakes—Adjust the free play in the foot clutch or the overcenter action of the hand clutch. Tighten the brakes if necessary, and adjust so that both pedals take up evenly. This will help avoid dangerous side swerves when operating in road gear.

9. Fuel filter—(Fig. D) Remove and clean the sediment bulb. This will prevent the carburetor from becoming clogged with small particles of dirt. Be sure the gasket is properly in place when replacing the bowl.

10. Air cleaner—(Fig. B) Remove and clean the oil cup. Scrape out the caked dirt in the bottom; then wash with kerosene or solvent. Refill with the same weight oil as you use in the engine. Do not overfill the cup or oil may be sucked into the carburetor.

11. Tires—Check for breaks or cuts in the casings. It will cost less to have them repaired now than during the busy season ahead. Check the rims of the front wheels for dents caused by driving over sharp objects. If bent, straighten the rim by pounding out with a sledge. This will avoid blowouts caused by pinched tubes.

12. Nuts and bolts—Last, but by no means least, go over the entire tractor and tighten all bolts, nuts, and capscrews that have worked loose. This simple precaution will often prevent serious and costly damage later.

◆◆◆

A beautiful sight! Ronald's Angus breeding herd on the Oregon Trail range.

He's Shooting For A 98% Calf Crop With

Controlled Breeding

By Paul Weller

Ronald dilutes each semen sample with a 10 to 1 solution of sodium citrate.

THERE WAS something special about the quiet-mannered Future Farmer who greeted us from across the Little Theater in Kansas City. Married only days before, he had traveled 500 miles east from his ranch on the edge of Nebraska's sandhills to spend his honeymoon at the National FFA Convention. He was among 382 young men receiving the American Farmer Degree that Wednesday afternoon.

Ronald Kennedy, three years out of high school, is an artificial breeding technician and herdsman for 350 fine Angus cows on the 4,000-acre home ranch in Morrill County, Nebraska. It was his unique artificial breeding program that interested us as we began to talk.

"I got the idea of starting my own artificial breeding program about two years ago when I was in college at the University of Nebraska," Ronald told us. "I read some books on the subject, and my father and I decided it would improve our beef breeding program." Ronald made it clear that he preferred to use one proven bull exclusively. "Gives a more uniform calf crop," he quickly added, referring to his business of raising heifer calves to sell for breeder replacements. Commercial bull calves are castrated and sold each fall for feeders, the registered ones being kept and sold as bulls.

A week's course at a cattlemen's school in Fort Collins, Colorado, primed Ron to start pregnancy testing his cows as a prelude to artificial breeding. "I've tested over 500 cows so far," he said, as he explained how the palpation-type method is used. Approximately 60 days after the cow has been bred, Ronald tests to see if the cow is in calf. If not, she is separated and bred again. The fact that several neighboring ranchers have contacted him to test their cows is proof of his newly acquired skill.

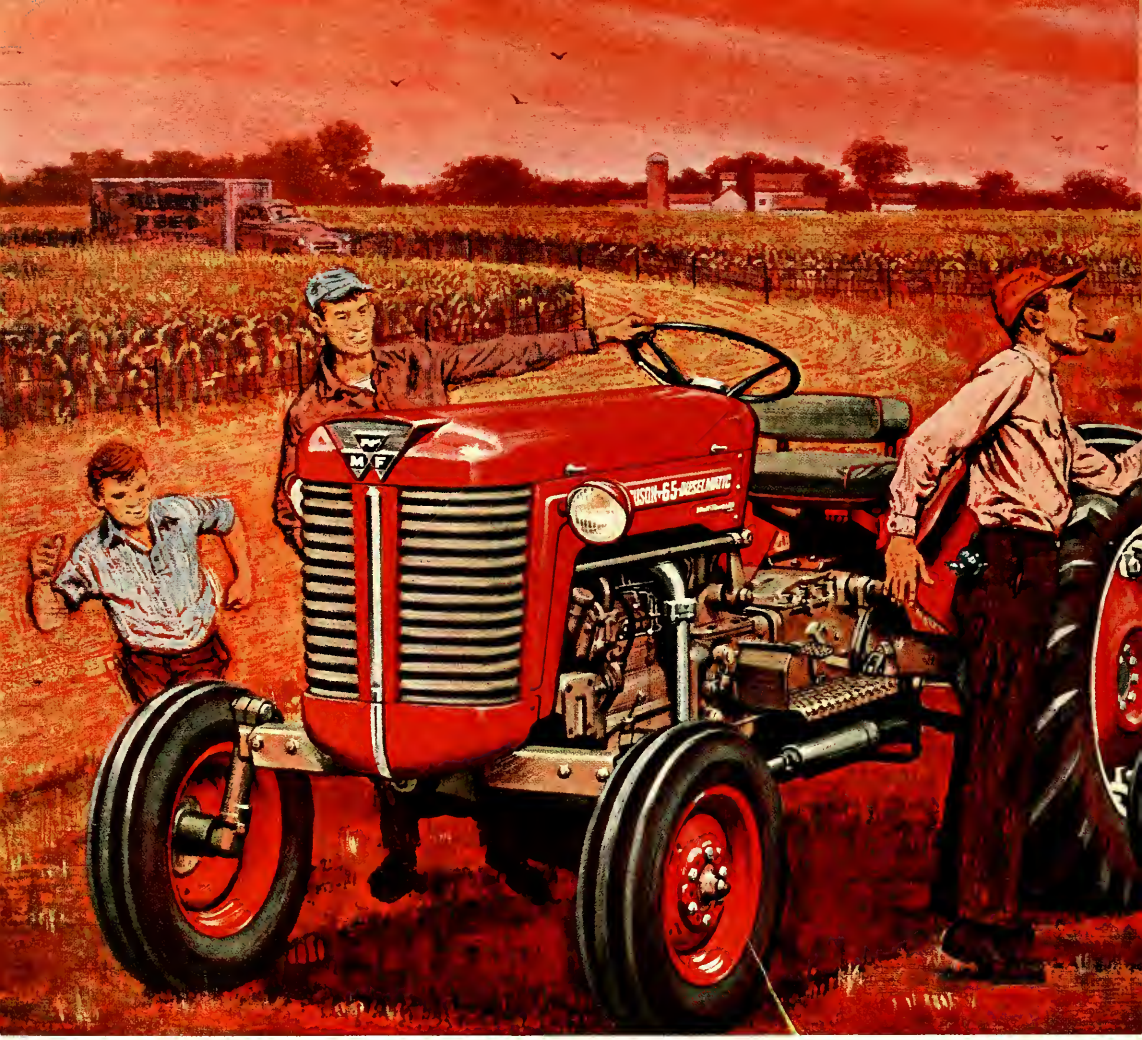
Ronald and his partner-father had already picked the bull they wanted as herd sire. "Black Conquestor" was the stocky Angus bull's name, and his pedigree shows him to be one of the sires of the grand champion carload lot at last year's International Livestock Exposition in Chicago. This past spring the eight-year-old bull was brought to the ranch.

"I began breeding after the cows calved this past spring, around May 1," Ron explained. "For the next 40 days I gathered semen every other day and bred almost all of the 350 brood cows."

Ron told us how he dilutes the semen down to a 10 to 1 solution, using a diluter made from citrate solution, egg yolk, and streptomycin. He went on to explain how he separates an egg yolk, dries it, and then crushes it for mixing with the citrate. By the time the seven or eight cc. of semen is added to the solution, a half hour has passed since collection time. Immediately, Ron takes his prized solution to a nearby refrigerator, where it is cooled down to 35 degrees.

Here it can be safely stored for three days if needed. Ronald mentioned that only one cc. was needed to breed a cow. Just stop and figure that in one-half hour this Future Farmer had prepared enough semen to breed 50 of his brood cows! Ron added, "I usually breed the dry cows and yearling heifers twice, once in the morning and again in the evening. The cows with calves . . . well, once is usually sufficient for them."

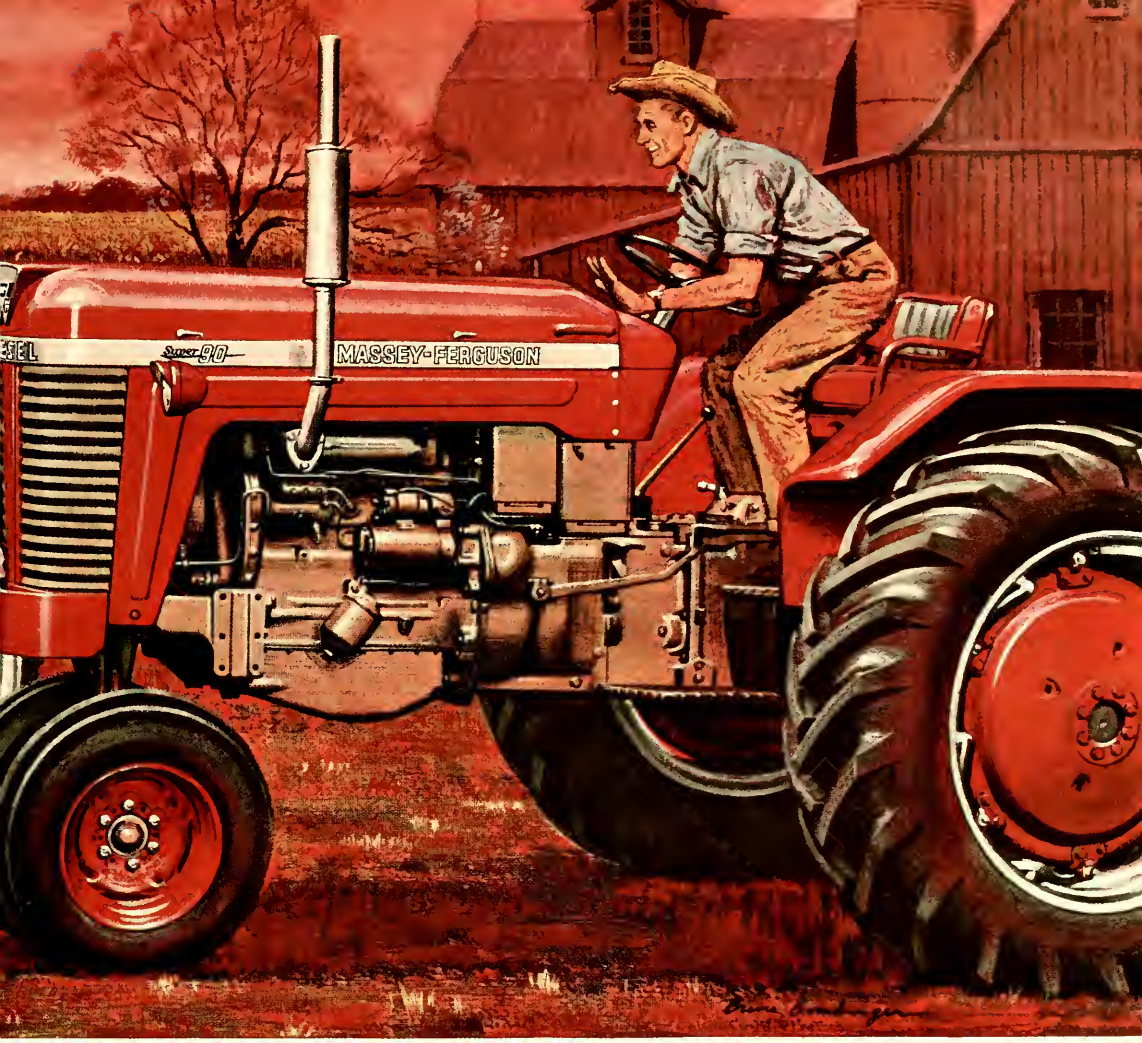
Ronald Kennedy hopes to increase his calf crop to an average birth rate of 98 percent with his new sideline. And this personally conducted breeding program is Ronald's answer to the ever-present profit squeeze facing beef farmers across the country. ◆◆◆



BIG-POWERED FUEL MISERS

Official tests prove it: these big diesels score high on fuel economy. With an exceptional *average* in Varying Power Tests of 13.52 HP-hours of work done per gallon for the MF 65 Dieselmatic... 12.65 for the big Super 90 Diesel. What does it? Direct injection combustion, the most efficient diesel combustion known. The Ferguson System that gets more *work* power out of every horsepower. Pick your power: 4-plow strong in the MF 65 Dieselmatic with Multi-Power... 5-plow strong in the big Super 90 Diesel. See these fuel misers, for sure!

MASSEY-FERGUSON



With Multi-Power you shift on-the-go at the flip of a switch. Flip into Multi-Power HIGH for more speed, LOW for more pull-power. Gives you 12 practical, usable forward gear speeds!

New Float-O-Matic Comfort Seat is high up out of the dust. Cushioned, shock-absorbing seat with back rest adjusts to your weight, moves fore and aft for best driving position.

Differential lock stops wheel spinning in slick going. Just step down on pedal and rear axles lock so both drive wheels turn together for the traction to pull you through with no delays.

Power Steering. Ferguson System of automated implement control. Variable drive PTO. Power adjusted rear wheels, 2-stage clutching. And other work saving automated features.

THERE'S STILL 334 Days

of publicity and public relations in a 1963 FFA Calendar

These official calendars are made available to you under Plan C of the National FFA Calendar program. The following message is printed in the sponsor's space on these calendars:

THE FUTURE FARMERS OF AMERICA

The world's largest farm boy organization . . . proving by its need by its aims and purposes, by its achievements and its name that . . . THERE WILL BE A FUTURE, THERE WILL BE FARMERS, THERE WILL BE AN AMERICA.

FEBRUARY 1963

					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

HOME & OFFICE BOOKLET STYLE

Popular booklet calendar. Has 12 full color pictures inside. Date pad has space for notes. Opens to size 7¾ x 14½ inches.

35¢ EACH

FOLDING POSTER STYLE

Large 14 x 20 inch wall calendar. Ideal for classrooms, public places, or anywhere a large calendar is needed.

70¢ EACH

DESK CALENDAR STYLE

An FFA picture on each month sheet. Perfect for desk or shelf. Size 4 x 6 inches when set up. Has FFA painting on back.

50¢ EACH

USE HANDY ORDER FORM BELOW TO ORDER IN ANY QUANTITY!

AN OFFICIAL CALENDAR IS A DAILY REMINDER OF FFA

Get Yours Today !

FOR FFA WEEK — SPECIAL CALENDAR PACKAGE FOR CHAPTER USE — **FOR FFA WEEK**

A selected group of Official calendars to provide the chapter with the right calendar for different public relations uses. Hang the big ones in public places. Give the smaller ones to businessmen and other friends of the chapter.

10 Folding Poster Calendars
25 Desk Calendars
50 Home & Office Booklet Calendars

ALL FOR **$32.50**

2 Packages $60.00

CLIP ORDER FORM ON DOTTED LINE, ENCLOSE IN ENVELOPE WITH PAYMENT AND MAIL:

TO: Calendar Dept., The National Future Farmer, Box 29, Alexandria, Virginia

I. ENCLOSED IS $ **(check, cash, money order) FOR THE FOLLOWING:**

_____ Home and Office, booklet style

_____ Folding Poster, largest style

_____ Desk Calendar style

_____ SPECIAL PUBLIC RELATIONS PACKAGE(S)

II. SEND CALENDARS TO: (Please print complete name and mailing address)

Name _____

Address _____

City & State _____

fold here 1st

If Mailing Coins PLACE COINS HERE Fold as shown

2nd fold here

final fold here

Ideas for FFA Week

February 16-23

THE WEEK of February 16-23 will be a busy one again this year from all indications. To pinpoint some of the many and varied activities planned for National FFA Week this year, we queried state associations from coast to coast. Here are some of their replies.

Out Iowa way, Future Farmers of the Grinnell Chapter will attend church in a group with FFA jackets prominently worn. Reverend Wendell, an honorary chapter member, has written a song with music dedicated especially to the FFA. And as church members open their bulletins to sing the FFA song, Grinnell Future Farmers will be ushering and taking part in the program.

In Des Moines, Iowa, urban union members of the Des Moines Technical High School will spend a weekend with nearby Future Farmers to get the feel of farm life. Other Iowa chapters will collect quart juice cans and distribute them for flower holders on Memorial Day. Still another chapter will recondition mailboxes and posts for rural residents.

Community service is Ohio's theme, and several chapters will assist needy families. A wheelchair for a crippled person, bringing in corn for a hospitalized farmer, collecting used furniture and clothing for a burned-out family—all are plans of Buckeye chapters. Back in local towns, Future Farmers will be pruning shrubs in the park, moving snow for stranded families, and improving Main Street by washing windows.

Oklahoma's more than 360 chapters will distribute official pictures, mats, and chapter information to 250 newspapers throughout the state, some papers devoting complete sections to the FFA. The state office in Stillwater will produce three 15- to 30-minute TV programs, then distribute station-break slides and film clips to the 10 stations in Oklahoma. Many local chapters have planned school assemblies, and more than 60 billboards will carry the official FFA poster.

At least 95 out of West Virginia's 103 chapters will put on some type of official FFA Week activity this year. Special programs featuring FFA movies are planned in some areas. More common activities will be placing window exhibits in local merchants' stores and presenting radio programs and spot announcements.

Local Future Farmers will be available in South Carolina to civic and community groups as speakers and program directors. In addition, the chapters are offering projectors and slides of local FFA programs for group meetings.

Several Kansas chapters are preparing feature stories on local FFA members for newspapers in their communities. This has proved to be very effective in previous years. Going hand in hand with newspaper coverage, most chapters schedule their Parent and Son Banquet during FFA Week.

County Federation Day on February 22 is Louisiana's planned program this year. Festivities such as judging contests, FFA queen contests, and public speaking events are on the agenda. News media in each county will carry the details. A special FFA state officers' goodwill tour through New Orleans will last three days in which time the officers will contact many influential businessmen. And in local communities, chapter presidents appear before civic groups to report their chapters' activities since the beginning of the school year.

Illinois Governor Otto Kerner will proclaim National FFA Week officially within the state at the beginning of the week; then in addition to usual promotion activities, Illinois FFA leaders will make tours to state FFA foundation contributors.

The Kentucky state office at Frankfort distributes short newspaper fillers regarding state FFA activities to dailies and weeklies. In addition, spot radio and TV announcements are sent to stations for use at their discretion.

Georgia's novel promotion idea is to have an Atlanta newspaper create a cartoon depicting National FFA Week, then prepare it in mat form for distribution to each newspaper in the state.

A 10-foot hexagonal showcase in the lobby of the Hotel Syracuse will highlight New York's promotion. The exhibit will be two-sided with one side an animated farm scene illustrating a typical New York dairy farm and showing how the FFA fits in. The other side will show the symbols of FFA, illustrating how the organization trains a member for leadership in his community. A bust mannequin wearing an FFA jacket, shirt, and tie will dominate the exhibit.

Down in Lumberton, Mississippi, the mayor will issue an official proclamation; then chapter officers, businessmen, and town officials will be photographed together placing an FFA Week poster in the bank window. The picture will then be circulated to newspapers in the area.

Many Virginia chapters will hold open house this year during FFA Week to welcome parents and friends into the local chapters. Examples of FFA activities and studies will be displayed.

And so it goes with chapters and state associations across the country. Americans will see and hear their blue-jacketed rural neighbors tell of National FFA Week. In churches, civic clubs, and on radio and TV—in almost every community in rural America—Future Farmers will gather during the week of George Washington's birthday to promote their organization.

THESE new books are reviewed as a reader service. If your local bookstore doesn't have them, write directly to the publisher and mention *The National FUTURE FARMER.*

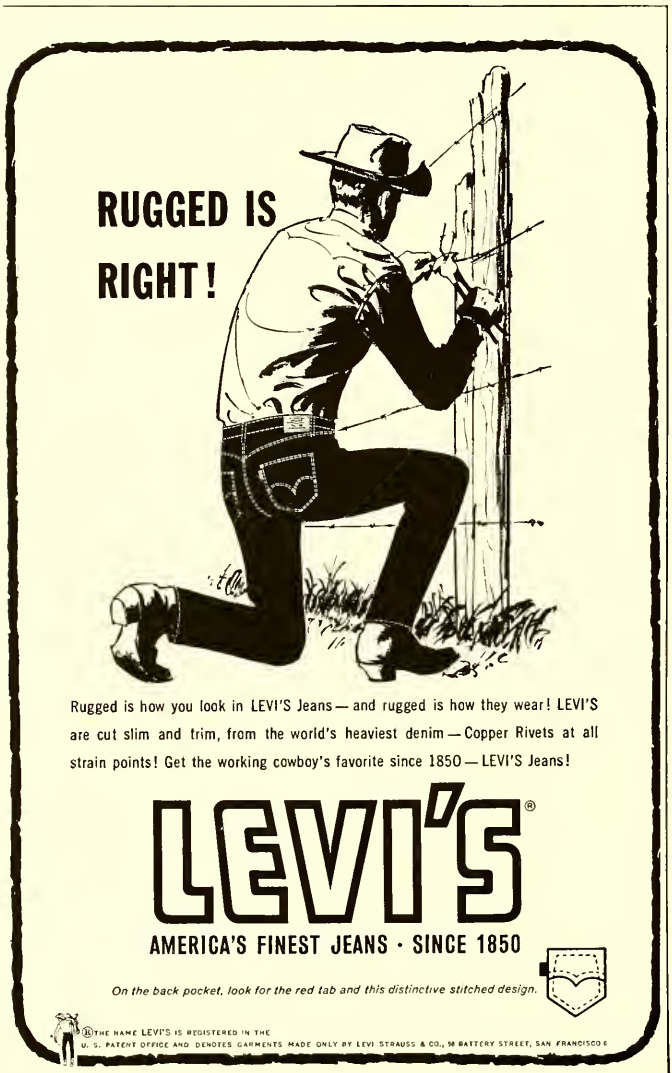
Let's Whittle (The Bruce Publishing Company, Milwaukee 1, Wisconsin, $3.50)—Whittling is fun—and easy for beginners, too! This delightful, well-illustrated book describes thoroughly the art of whittling from selecting your knife to painting the finished project. By simply following the numerous diagrams, you can whittle primitive totem poles, birds, animals, book ends, and many others.

Parliamentary Procedure (Robert B. Luce, Inc., Washington, D. C., $3.95)—Author Byrl A. Whitney incorporated his 25 years of study on parliamentary law into this 270-page book. It is written in simple terms for use by any group or organization which takes part in making decisions through parliamentary procedure. Future Farmers will find its chart of motions and glossary of parliamentary terms helpful in conducting meetings. In addition, an index of all motions has been compiled for easy reference when needed. Chapter officers can well appreciate its listing of many parliamentary difficulties and ways to resolve them.

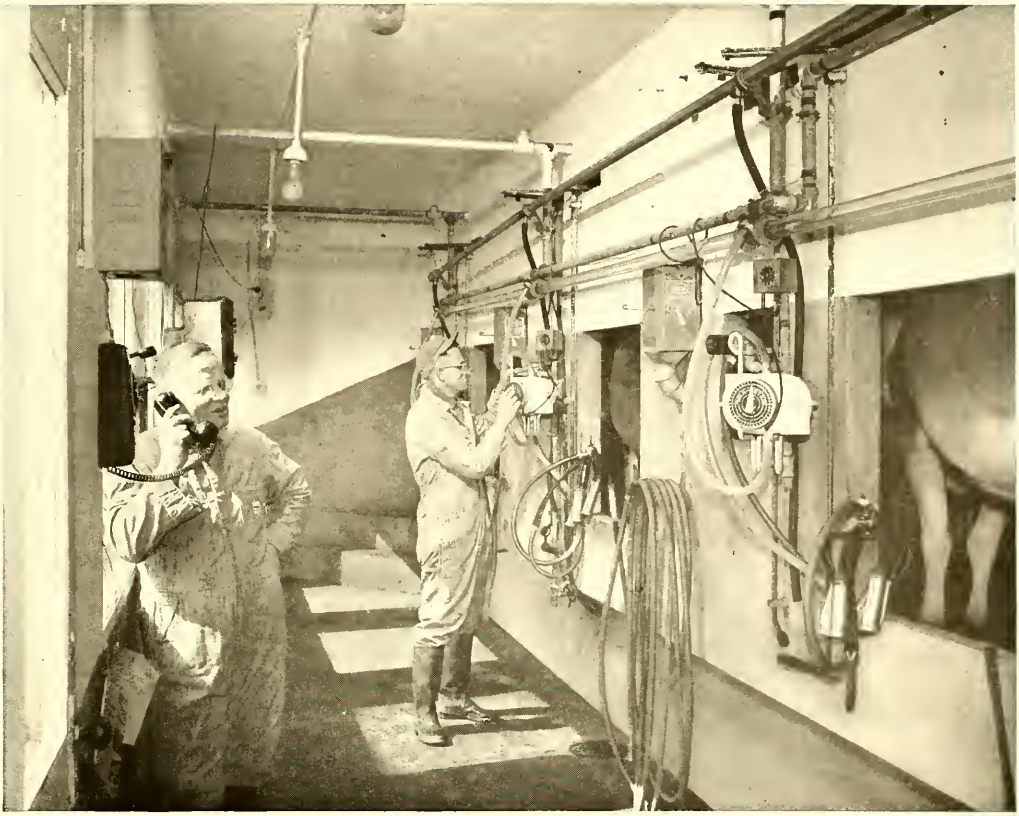
Soil Science Simplified (Balt Publishers, West Lafayette, Indiana, $1.00)—This second edition paperback authored by Purdue Scientist Helmut Kohnke is written to fill the gap between the technical soil manuals and the individual bulletins. Within its 79 pages, it covers such topics as chemical properties of soils, soil classification, and soil and crop management. Its simple, to-the-point style and illustrations help even the beginner to understand the complexities of soil science.

All About Guns for Boys (T. S. Denison and Company, Inc., Minneapolis, Minnesota, $3.95)—As implied by the title, this book covers a wide area—from what a gun is to wise and legal uses for guns. It is written by Forrest D. Shigley and has an attractive cover encasing seven easy-to-read chapters. One chapter also takes up ammunition and how it works. The text is suitable for a wide range of readers.

Modern Farm Power (Prentice-Hall, Inc., Englewood Cliffs, New Jersey, $6.60)—All principles of farm power from internal combustion engines to hydraulic power units are adequately discussed in this 274-page book written by William Promersberger and Frank Bishop. In addition to chapters on the operating principles and parts of engines and vital parts, two chapters on the maintenance of electric motors are included. Each chapter has questions and shop projects at the end to help students to better understand the material.


RUGGED IS
RIGHT!
Rugged is how you look in LEVI'S Jeans — and rugged is how they wear! LEVI'S are cut slim and trim, from the world's heaviest denim — Copper Rivets at all strain points! Get the working cowboy's favorite since 1850 — LEVI'S Jeans!
LEVI'S®
AMERICA'S FINEST JEANS · SINCE 1850
On the back pocket, look for the red tab and this distinctive stitched design.
® THE NAME LEVI'S IS REGISTERED IN THE U. S. PATENT OFFICE AND DENOTES GARMENTS MADE ONLY BY LEVI STRAUSS & CO., 98 BATTERY STREET, SAN FRANCISCO 6

"Either that stupid goose goes, or I go!"



"We were beating a path to the kitchen door..."

Extension telephones have cut two hours from the daily routine of the Ross Winan dairy farm, near Goble, Oregon.

Communications were mostly "legwork" before they were installed. Mrs. Winan had to make repeated trips to the outbuildings to call Ross or their son to the kitchen telephone.

Now these calls are handled on either the milkroom or machine shop extension telephones.

"We were beating a path to the kitchen door before we got these extensions," says Ross. "Now, every call we make or take saves us 10 to 15 minutes. It's like giving us two extra hours a day to get things done."

Perhaps you've never counted the minutes or hours you spend beating a path to the house telephone. Give it some thought. Then call your Telephone Business Office and find out how little an extension phone really costs.

• If you want an all-around communications system, Farm Interphone is the answer. It gives you on-the-farm communications between strategically located Interphone stations. You can also make or take regular outside calls from any of these telephones.

BELL TELEPHONE SYSTEM

photo roundup

George Shadbolt of Gordon, Nebraska, upholds a family tradition with these coveralls. His father wore them when he attended the school back in 1929.

A bushel of publicity for Minnesota Future Farmers was gathered by Dan Von Bank, state reporter. FFA Week clippings are from state newspapers.

Mississippi's Future Farmers brought out their state FFA sweetheart, Pamela Farmer, for a place of honor in the colorful forestry parade at the State Fair in Jackson. She's a freshman at Mississippi College this year, fellows.

Alan Lockley's crossbred steer stole the show at Wharton County Fair in Texas. First cross to win here, the Brahman-Hereford watches Kirby Cunningham award the plaque.

Just in time for National FFA Week was this sign denoting the town of George in Washington state. Incorporated last year, it's near Quincy where Roger and Gordon Lind live.

A great tractor/now even greater

the NEW Series III D-17

This new advance version of the great D-17 Tractor is the newest tractor in the big 4-plow class. It's designed with the features to match the needs of tractor users . . . coast to coast.

What made the D-17 GREAT?

POWER-CRATER Engine: Quick responsive power that gives more for the fuel dollar.

TRACTION BOOSTER System: Adds extra weight automatically to drive wheels . . . speeds jobs . . . saves fuel.

HAND CLUTCH: Shift on-the-go . . . inching control when needed . . . live PTO.

POWER SHIFT WHEELS: The right tread—quick.

ROLL-SHIFT FRONT AXLE: Safe, easy.

What makes the Series III D-17 even GREATER?

New Oil Filtering System for the hydraulics and Power Director clutches assures longer trouble-free life; ***Greater Oil Capacity*** for the live hydraulic system to handle more or larger remote rams; ***Big Combination Band and Disc Brakes*** give quick, positive braking action; ***New Dry Air Cleaner*** with built-in pre-cleaner and automatic dirt unloader; plus new oval muffler for quieter operation, new headlights on fenders, and many other refinements.

The Series III D-17 is strong and tough for heavy jobs; you can expect efficient low-cost performance on *All* Jobs . . . light or heavy loads.

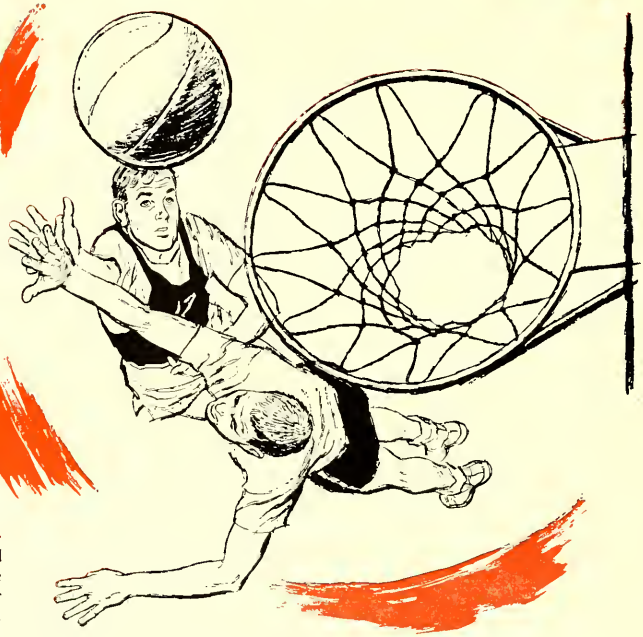
You can see it, feel it, and drive it at your Allis-Chalmers dealer. Gasoline, diesel and LP gas.

Allis-Chalmers Mfg. Company, Farm Equipment Division, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS

POWER-CRATER and TRACTION BOOSTER are Allis-Chalmers trademarks

TRICKY and the TALL MAN!



Lighthouse Harry outjumped him every time!

Fiction by Jos. S. Wilson

THE GYM floor was full of leaping, running figures. The thud of basketballs hitting against the backboards or slapping against the floor mixed with the sharp cries of the players.

It was basketball tryouts again. The sights and the sounds caused Tricky's heart to swell with pleasure.

One or two of the nearby players saw him standing at the door.

"Hi, Tricky! How's the old eye this year?" said one.

Tricky winced. That had been a weak spot and was one of the reasons he had been substitute center all through last season. He had been very good on lay-ups and the backboard bounce, but the set shots had been ferocious.

"I've been practicing all summer. I think I've got it now."

"Shucks!" said one of the others. "What's the diff? Bucky's gone. You're sure to be the center now."

"Says who?" The boy moved closer to the group, and his eyes smiled at Tricky over the others' heads. "So, you're Tricky, eh?"

The speaker, a tall, slim, rangy chap built just right for the center spot on a basketball team, was a little too bright of eye and too assured in manner. It seemed to Tricky to be a cover-up for an uneasy feeling underneath.

"Yes, that's my nickname. Who are you?"

"I'm Harry Walters. Our family just moved in."

The tall boy's face broke into a grin. "Looks like I've got to buck you to play center from here on in, eh?"

Tricky's heart sank and then anger bloomed over the resentment. He bit his lip to keep hot words in. He knew his attitude was all wrong, but he had thought it was all going to be so easy. Bucky was gone. There wasn't anybody who could measure up for center now —except Tricky. But here was competition.

"Yeah!" ground out Tricky. "I guess it's you and me!" He turned away. "I've got to change now. See you later."

The coach met him at the shower room door.

"Hello, Tricky!" he said, his eyes studying the boy gravely. "I'm glad to see you back. We're going to need you badly this year, as usual." He paused a moment, his eyes still on Tricky's face. He drew a breath and then plunged, his tongue moistening his lips before he began.

"We have another center prospect. His name is Harry Walters. He played center on the varsity at Elmview High out in the Midwest. I've seen him jump and he is as limber as a jack rabbit in a brier patch. He is going to try to knock you out of the varsity spot."

A lump shot into Tricky's throat. Even the coach was against him, it seemed, warning him like this. It wasn't fair! What did you have to do to win a spot, anyway? Hadn't he put in three long years of eternal subbing for Bucky? Wasn't that enough? Couldn't he have the center spot for his last year?

The coach seemed to be waiting for something, but Tricky couldn't have said a word if his life depended on it. The coach gave him a pat on the shoulder and turned away without another word.

After warm-up practice the coach set up teams for scrimmage. Tricky started on the varsity team at center with the returning members of last year's squad. The best of the substitutes were lined up in the various positions against them. Tricky stood face to face with the new boy in the jump circle. The rangy youth was undoubtedly taller than he was and acted like a veteran. The other fellows had already dubbed him Lighthouse Harry.

The whistle blew and the ball went up. Tricky shot into the air, but Lighthouse tapped the ball away easily.

A sinking feeling dragged at Tricky as he pounded the floor with heavy feet. It just wasn't any good. Tricky felt heavy and loggy. He played in

(Continued on Page 46)

Don Keim watches as transistor converts "apple" current to alternating current.

Tiny transistors that get "juice" from an apple

General Motors scientists are now developing transistors that can slip through the eye of a needle and which use only a thousandth of the power needed by conventional transistors. In fact, power consumption of these transistors is so small it's measured by the microwatt — the millionth part of a watt.

To show this, GM scientists set up the demonstration in the picture above. The apple is the source of direct electrical current and acts much like a storage battery. Metal electrodes stuck into it supply power for the transistor circuit in Don's hand. This circuit is called an oscillator and easily converts the 7 microwatts of d.c. power from the apple into alternating current, as indicated on the oscilloscope screen at rear.

This and other intriguing solid state devices are evolving from fundamental General Motors research into how electrons move and behave.

Complicated? Only because the expanding universe of scientific knowledge is complicated. And for this reason General Motors people are facing a constant challenge to test, to explore, to improve. In short — to find the better way through engineering and research.

General Motors *makes things better*

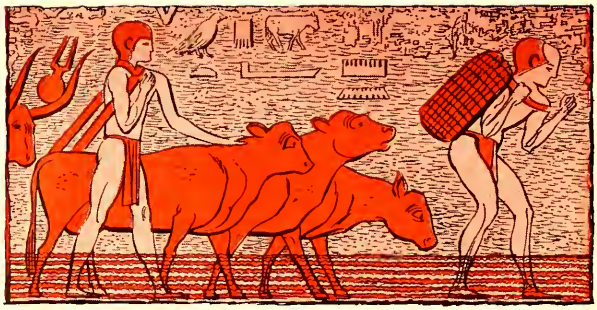
Chevrolet • Pontiac • Oldsmobile • Buick • Cadillac. *All with Body by Fisher*
Frigidaire • GMC Truck & Coach • GM Diesel • Delco • AC Spark Plug

Don Keim visited GM's Tech Center while a senior at Brighton High, Rochester, New York. Rocket instrumentation is a spare-time pursuit with Don. Naturally, he was keenly interested in research on field effect transistors during his visit to the GM Technical Center at Warren, Michigan.

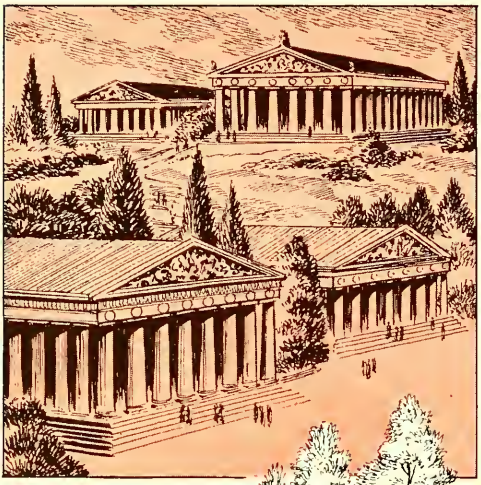
THE STORY OF

FARMING

No.2 The Growth of Civilization.

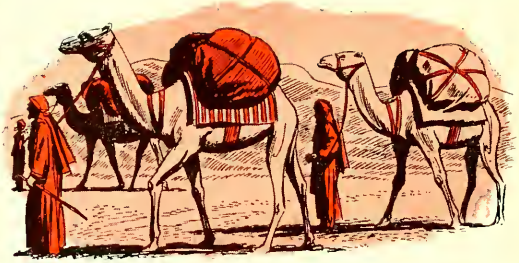


WHEN MAN HAD LEARNED TO GROW CROPS AND BREED LIVESTOCK, LIVING FOR HIM BECAME MUCH LESS HAZARDOUS. AS LONG AS HIS HARVESTS WERE BOUNTIFUL AND HIS DOMESTIC ANIMALS CONTINUED FRUITFUL, MAN WAS ASSURED OF A PLENTIFUL SUPPLY OF FOOD, CLOTHING, AND SHELTER.



POPULATIONS INCREASED. MANUFACTURED GOODS FROM FARM PRODUCTS WERE PRODUCED IN EVER INCREASING QUANTITIES. GREAT CITY-STATES SPRANG UP, ARTS AND SCIENCES FLOURISHED. IT WAS THE BEGINNING OF THE GOLDEN AGE.

THE EXCHANGE OF SURPLUS AGRICULTURAL PRODUCTS AND MANUFACTURED GOODS NATIVE TO PARTICULAR AREAS CREATED VAST MERCHANT FLEETS AND EXPANDED OVERLAND TRADE ROUTES TO ALL CORNERS OF THE KNOWN WORLD.



THE DIGGING STICK WAS REPLACED BY CRUDE WOODEN PLOWS DRAWN BY OXEN... IN MANY CASES BY HUMANS. THE REAPING HOOK WAS REPLACED BY THE SCYTHE AND CRADLE. ROME, ONE OF THE FIRST GREAT AGRICULTURAL STATES, DISCOVERED THE ADVANTAGES OF CROP ROTATION, BUT THERE IS NO RECORD OF OTHERS USING THIS PRACTICE.

FIELDS WERE FERTILIZED TO SOME EXTENT WITH MANURE, FARM RESIDUE, BONES, EVEN BLOOD. SOME AREAS LEARNED TO LET PART OF THEIR FIELDS LIE FALLOW FOR A SEASON TO REPLENISH THE SOIL'S NUTRIMENT.

BUT FARMING WAS STILL VERY PRIMITIVE... WASTEFUL OF BOTH LAND AND LABOR. ANIMAL HUSBANDRY WAS GREATLY NEGLECTED. THE CIVILIZED WORLD WAS FINDING IT INCREASINGLY DIFFICULT TO GROW ENOUGH FOOD FOR ITS NEEDS. EVEN AS LATE AS THE 16TH CENTURY IT TOOK NINETEEN FARMS TO GROW ENOUGH FOOD TO FEED ONE CITY PERSON BESIDES THE FARMER'S FAMILIES. THE PROBLEM OF IMPROVING THE QUALITY AND QUANTITY OF LIVESTOCK AND OF MAKING EVERY ACRE OF ARABLE LAND MORE PRODUCTIVE BECAME A VITAL NECESSITY.

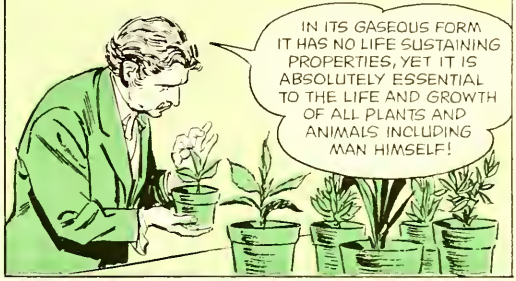
NITROGEN THE FERTILIZER PARADOX...

IT WON'T SUSTAIN LIFE, YET IT IS ESSENTIAL TO ALL LIFE!

IN 1772, K. SCHEELE DISCOVERED THAT COMMON AIR IS A MIXTURE OF TWO GASES...

HIS "FIRE AIR" WAS OXYGEN... THE "FOUL AIR" WAS NITROGEN.

FURTHER DISCOVERIES SHOWED THAT THE ATMOSPHERE CONTAINS ABOUT 80% **"FREE"** NITROGEN. BUT NOT UNTIL EARLY IN THE 19TH CENTURY WAS IT DISCOVERED THAT NITROGEN COMPOUNDS, OR **"FIXED"** NITROGEN IS PRESENT IN ALL SOILS AND IN THE BASIC SUBSTANCE OF **ALL** LIVING MATTER. MANY SCIENTISTS, AMONG THEM JUSTUS VON LIEBIG, PONDERED THE PARADOX...


IN ITS GASEOUS FORM IT HAS NO LIFE SUSTAINING PROPERTIES, YET IT IS ABSOLUTELY ESSENTIAL TO THE LIFE AND GROWTH OF ALL PLANTS AND ANIMALS INCLUDING MAN HIMSELF!

LIEBIG AND HIS CONTEMPORARIES KNEW THE VITAL IMPORTANCE OF FIXED NITROGEN AS A FERTILIZER IN THE SOIL. THEY DISCOVERED THAT RAIN AND SNOW DID CARRY A CERTAIN AMOUNT OF NITROGEN FROM THE AIR INTO THE SOIL. BUT NOT UNTIL 1886, ABOUT FORTY YEARS LATER, WAS IT FOUND THAT CERTAIN MICRO-ORGANISMS ARE ABLE TO FIX ATMOSPHERIC NITROGEN AND THUS REPLENISH THE SOIL'S SUPPLY.

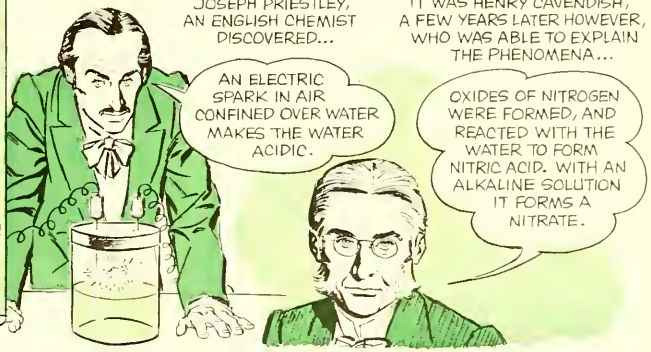
THE MOST IMPORTANT OF THESE MICRO-ORGANISMS ARE **RHIZOBIUM,** FOUND ON THE ROOTS OF LEGUMINOUS PLANTS, AND **AZOTOBACTER** WHICH LIVE INDEPENDENTLY IN THE SOIL.

THESE BACTERIA ABSORB THE GASEOUS NITROGEN AND ASSIMILATE IT IN THEIR BODIES AS PROTEIN THUS "FIXING" IT. THEN IT CAN BE TRANSFORMED INTO OTHER ORGANIC FORMS AND UTILIZED BY THE GROWING PLANT.

MANURE AND CROP RESIDUES HAD BEEN USED FOR CENTURIES WITHOUT KNOWING THAT IT WAS THEIR NITROGEN CONTENT THAT MADE THEM SO USEFUL AS FERTILIZERS. ONCE THE IMPORTANCE OF THIS ELEMENT BECAME KNOWN, THE RACE WAS ON TO DEVELOP NITROGEN FIXATION BY CHEMICAL MEANS.

JOSEPH PRIESTLEY, AN ENGLISH CHEMIST DISCOVERED...

IT WAS HENRY CAVENDISH, A FEW YEARS LATER HOWEVER, WHO WAS ABLE TO EXPLAIN THE PHENOMENA...


AN ELECTRIC SPARK IN AIR CONFINED OVER WATER MAKES THE WATER ACIDIC.
OXIDES OF NITROGEN WERE FORMED, AND REACTED WITH THE WATER TO FORM NITRIC ACID. WITH AN ALKALINE SOLUTION IT FORMS A NITRATE.

THIS WAS AROUND 1855. NOT UNTIL THE EARLY 1900'S, HOWEVER WAS THIS PROCESS OF MAKING NITRATE DONE ON A LARGE SCALE IN A PLANT AT NIAGARA FALLS, N.Y. AND A LITTLE LATER IN THE GREAT-ARC-PROCESS PLANTS BUILT IN NORWAY.

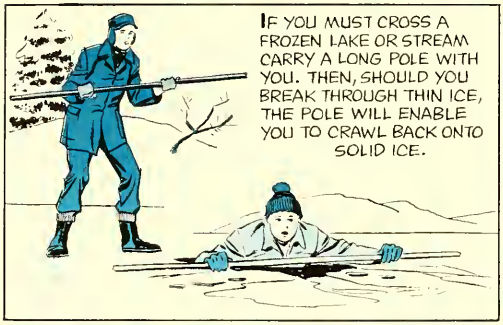
IN THE MEANTIME VAST DEPOSITS OF NATURAL SODIUM NITRATE WERE FOUND ALONG THE WESTERN SHORES OF CHILE... DROPPINGS, OR GUANO, FROM MILLIONS OF SEA BIRDS ROOSTING ON THE ROCKS OFFSHORE. THIS BECAME AN IMPORTANT SOURCE OF FIXED NITROGEN FERTILIZER FROM ABOUT 1840 AND IS STILL IN GREAT DEMAND.

THE CYANAMID PROCESS OF NITROGEN FIXATION WAS DEVELOPED IN GERMANY. IT WAS FIRST USED IN A COMMERCIAL PLANT IN ITALY IN 1907... IN 1908 AT NIAGARA FALLS, AND BY 1917 IN NEARLY EVERY COUNTRY IN THE WORLD.

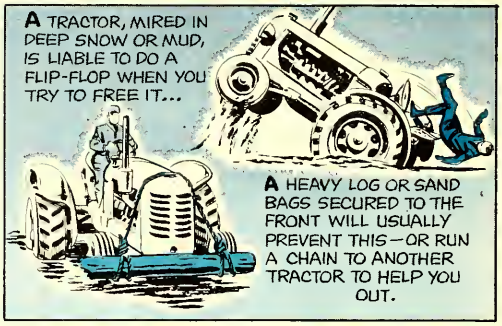
BY 1920 ALMOST ALL NEW NITROGEN-FIXING PLANTS USED THE SYNTHETIC AMMONIA PROCESS, ALSO DEVELOPED IN GERMANY.

THE DISCOVERY AND DEVELOPMENT OF **PHOSPHATE** WILL APPEAR IN THE NEXT ISSUE.

WINTER SAFETY

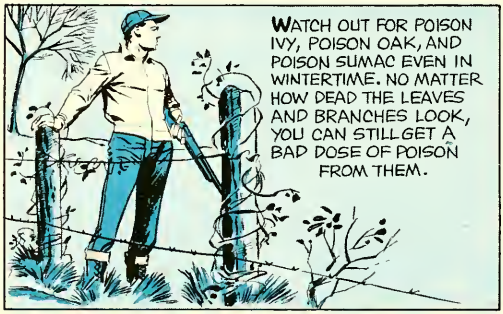


IF YOU MUST CROSS A FROZEN LAKE OR STREAM CARRY A LONG POLE WITH YOU. THEN, SHOULD YOU BREAK THROUGH THIN ICE, THE POLE WILL ENABLE YOU TO CRAWL BACK ONTO SOLID ICE.

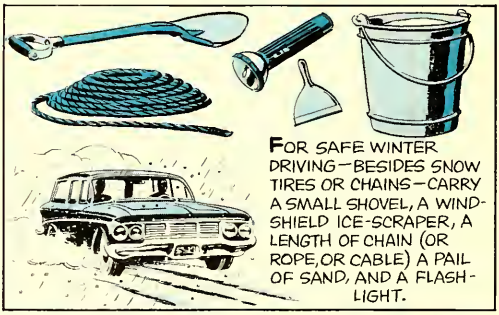


A TRACTOR, MIRED IN DEEP SNOW OR MUD, IS LIABLE TO DO A FLIP-FLOP WHEN YOU TRY TO FREE IT...

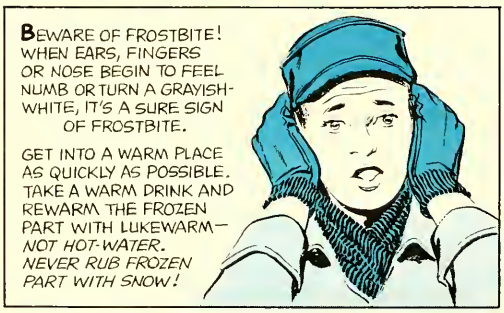
A HEAVY LOG OR SAND BAGS SECURED TO THE FRONT WILL USUALLY PREVENT THIS—OR RUN A CHAIN TO ANOTHER TRACTOR TO HELP YOU OUT.



WATCH OUT FOR POISON IVY, POISON OAK, AND POISON SUMAC EVEN IN WINTERTIME. NO MATTER HOW DEAD THE LEAVES AND BRANCHES LOOK, YOU CAN STILL GET A BAD DOSE OF POISON FROM THEM.

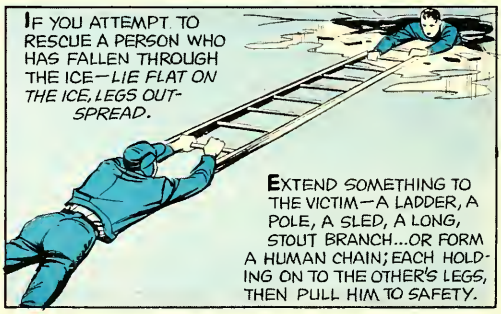


FOR SAFE WINTER DRIVING—BESIDES SNOW TIRES OR CHAINS—CARRY A SMALL SHOVEL, A WINDSHIELD ICE-SCRAPER, A LENGTH OF CHAIN (OR ROPE, OR CABLE) A PAIL OF SAND, AND A FLASHLIGHT.



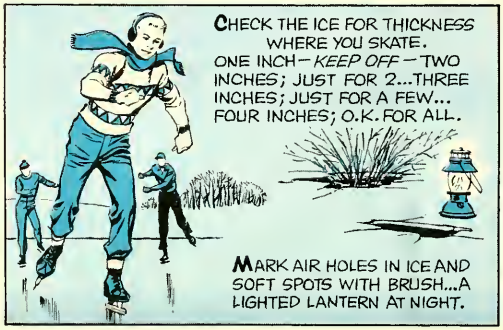
BEWARE OF FROSTBITE! WHEN EARS, FINGERS OR NOSE BEGIN TO FEEL NUMB OR TURN A GRAYISH-WHITE, IT'S A SURE SIGN OF FROSTBITE.

GET INTO A WARM PLACE AS QUICKLY AS POSSIBLE. TAKE A WARM DRINK AND REWARM THE FROZEN PART WITH LUKEWARM—*NOT HOT-WATER. NEVER RUB FROZEN PART WITH SNOW!*



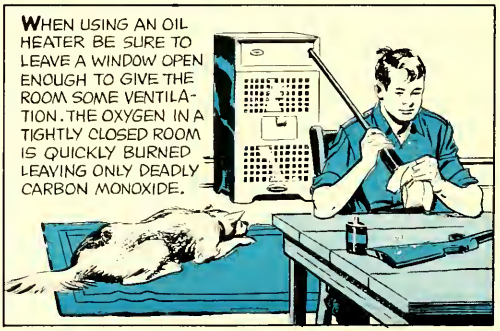
IF YOU ATTEMPT TO RESCUE A PERSON WHO HAS FALLEN THROUGH THE ICE—*LIE FLAT ON THE ICE, LEGS OUTSPREAD.*

EXTEND SOMETHING TO THE VICTIM—A LADDER, A POLE, A SLED, A LONG, STOUT BRANCH...OR FORM A HUMAN CHAIN; EACH HOLDING ON TO THE OTHER'S LEGS, THEN PULL HIM TO SAFETY.



CHECK THE ICE FOR THICKNESS WHERE YOU SKATE. ONE INCH—*KEEP OFF*—TWO INCHES; JUST FOR 2...THREE INCHES; JUST FOR A FEW... FOUR INCHES; O.K. FOR ALL.

MARK AIR HOLES IN ICE AND SOFT SPOTS WITH BRUSH...A LIGHTED LANTERN AT NIGHT.



WHEN USING AN OIL HEATER BE SURE TO LEAVE A WINDOW OPEN ENOUGH TO GIVE THE ROOM SOME VENTILATION. THE OXYGEN IN A TIGHTLY CLOSED ROOM IS QUICKLY BURNED LEAVING ONLY DEADLY CARBON MONOXIDE.

A TRUE STORY OF FFA

by AL STENZEL

IF IT'S TRUE THAT A GOOD FARMER HAS A "GREEN THUMB" THEN A CAPABLE ELECTRICIAN SHOULD HAVE A "COPPER" THUMB... WHICH LEADS TO THE CONCLUSION THAT 18-YEAR-OLD **ROBERT DENUNE** MUST HAVE ONE OF EACH. ROBERT LIVES WITH HIS PARENTS ON A FARM IN MECHANICSBURG, OHIO...A VERY APPROPRIATE ADDRESS FOR ONE WITH HIS MECHANICAL ABILITY.

WHEN ROBERT BEGAN HIS VO-AG STUDIES AT MECHANICSBURG HIGH SCHOOL, HE TOOK CARE OF 10 ACRES OF CROPS AND TWO DAIRY COWS OF HIS OWN BESIDES HELPING HIS FATHER AND BROTHER ON THE FAMILY FARM.

BY THE TIME HE GRADUATED, HE WAS FARMING 122 ACRES WHICH HE RENTED FROM HIS FATHER, OWNED 8 HEAD OF CATTLE, A TRACTOR, AND $600 WORTH OF ELECTRICIANS' AND MECHANICS' TOOLS—PLUS MONEY IN THE BANK!

BESIDES, HE WAS A LETTERMAN ON THE BASEBALL AND BASKETBALL TEAMS...

THAT WAS NOT ROBERT'S ONLY AWARD...

I'M GLAD BOB WAS ELECTED VICE PRESIDENT OF THE FFA CHAPTER.
HE KNOWS HIS FARMING. HE'S WON SO MANY FIRST PRIZES AT COUNTY AND STATE FAIRS HE MUST HAVE A GREEN THUMB!

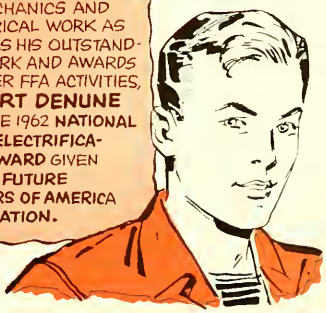
HE WON SECOND PLACE IN THE WELDING PROJECT AT THE STATE FAIR ONE YEAR...

...WHICH BRINGS UP THE "COPPER-THUMB" IDEA...

ALL DURING HIS HIGH SCHOOL DAYS, AMONG HIS MANY OTHER ACTIVITIES, HE STUDIED AND PRACTICED FARM ELECTRIFICATION.

...TESTING AND REPAIRING HOUSEHOLD APPLIANCES
...HOOKING UP FROM MAIN LINE
...COMPLETE WIRING OF A LARGE BARN
...HOMEMADE BROODER FOR PHEASANTS (BOB IS A MEMBER OF THE DARBY VALLEY CONSERVATION CLUB).

FOR HIS PROFICIENCY IN MECHANICS AND ELECTRICAL WORK AS WELL AS HIS OUTSTANDING WORK AND AWARDS IN OTHER FFA ACTIVITIES, **ROBERT DENUNE** WON THE 1962 **NATIONAL FARM ELECTRIFICATION AWARD** GIVEN BY THE **FUTURE FARMERS OF AMERICA FOUNDATION.**



TRICKY and the TALL MAN

(Continued from Page 40)

bursts. Lighthouse Harry outjumped him every time. A ball of pain seemed to stick in Tricky's chest. It grew heavier and heavier as it seemed that Lighthouse Harry not only jumped better but was also all over the floor and especially around the area near the backboards.

At one point, as they stood face to face waiting for the whistle, Lighthouse smiled, his eyes and face aglow. You could see he loved the game. He said, "This would be a tough team to make in any league. You guys play for keeps!"

A burst of anger flared through Tricky. Was this guy trying to kid him or something? Anybody with half an eye could see him jumping like a kangaroo. He had it made! He—had—it—made!

Tricky caught a glimpse of the coach's face out of the corner of his eye. The coach's lips seemed to smile around the end of the whistle he was holding to his mouth.

The anger overflowed into Tricky's legs and brought back all his speed and drive. But it was no use. Lighthouse outjumped him every time. And when there was a tough defensive tangle, Lighthouse would move out, well out of the zip, the twists, and the twirls, and call for the ball. Then he would lob it into the basket for a two-pointer in the most nonchalant manner. After practice Tricky took a quick shower and left in a hurry. He couldn't stick around and face the others feeling as he did.

At practice the next day the coach blew the whistle to stop the warm-ups. "Tricky!" he said. "Let's do some shifting. You take over the second spot, and, Harry, you jump varsity center."

Tricky's eyes blurred as he changed places with Lighthouse. The latter grinned until he got a good look at Tricky's face. Then his own face sobered.

"What's the matter, Tricky?" he whispered. "Anything wrong?"

Tricky swallowed. "Oh-h-h, go soak your head!" he growled.

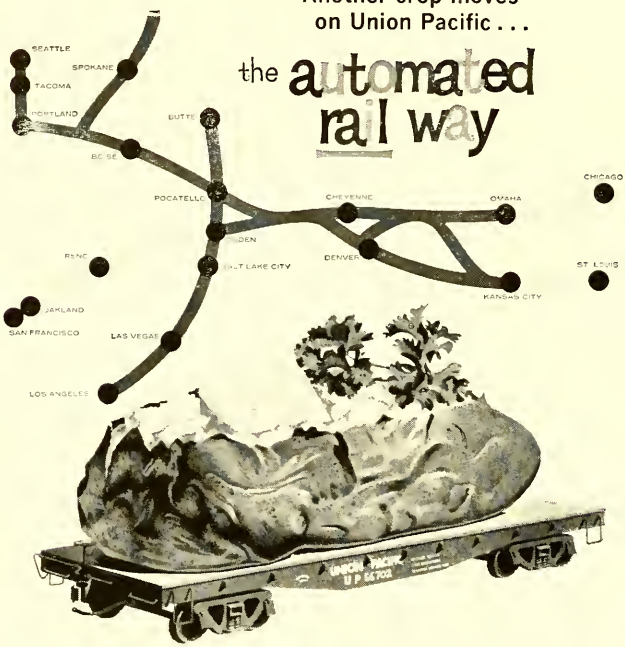
Lighthouse straightened up and waited for the whistle. When it came, his jump was just a bit late and Tricky's hand found the ball. In the ensuing rush and bustle up and down the court, Tricky's emotions came to a steady level. He'd show them! He wasn't finished by a long shot yet!

His mind worked at top speed, outthinking everybody, it seemed. His body, smooth and well-trained, acted in full coordination. Every muscle tied to every nerve impulse until he was always there when a ball needed to be passed, grabbing rebounds, making beautiful shots. His defensive play was tough and hard to get by. Now he was at his spot. For three years he had led a second team against the varsity five.

(Continued on Page 48)

Another crop moves on Union Pacific . . .

the automated railway



Potatoes are one of the big crops of the West carried on Union Pacific. Bringing supplies and equipment to produce them is equally important. Shipments on this railroad move surely and swiftly by electronic controls and communications, supervised by shipping experts, the automated rail way.

Union Pacific has grown up with the West. Working hand in hand with agricultural experts, U.P.'s own staff of agriculturists has helped improve crop production and develop marketing to brighten the future of western farms.

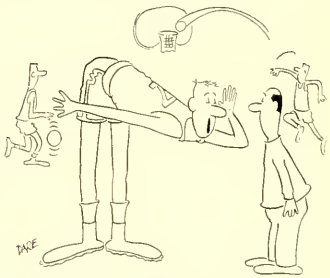
Opportunities for energetic young farmers are great in the growing West. Far from crowded cities, here is a promising future which this railroad shares with Agriculture.

UNION PACIFIC RAILROAD

Sharing with you the future of farming in the growing West.

UNION PACIFIC RAILROAD

OMAHA 2, NEBRASKA



"Anything else while I'm down here, coach?"

NEW FROM OLIVER
FOR '63

Row-Crop, Row-Crop Utility, Wheatland models. Choice of gas, diesel, or LP gas.

OLIVER 1600

60 H.P.* 4-5 PLOW 12-SPEED WITH BALANCED-PERFORMANCE

Balanced power with the fuel-squeezing punch of a new Oliver engine—smooth as only Oliver 6-cylinder power can be. Loaded with high torque over a broad range, this new engine responds with flashing *go* to your every demand! You'll see the difference in acres gained and gallons saved per day.

Balanced comfort through a new steering wheel with both telescopic and tilt-up features for fatigue-free operation (permits comfortable stand-up driving); new comfort-arranged platform with easy-to-reach controls; new full power steering; Suspension-aire Seating with back rest.

Balanced speed ratios with 12 ideally spaced speeds from 1.85 to 13.57 MPH . . . shift-on-the-go through optional Hydra-Power Drive, with instant pull-power increase up to 36%, instant 26% speed reduction . . . wider choice of speeds for each job than any other transmission.

Balanced weight perfectly distributed front to rear—over 3 tons of live weight that translates into superior traction, puts more power to work!

Balanced 3 point draft control hitch with double feed-back design, permits free-floating implement action without deep-shallow variations. Available with push-button Hydra-lectric system, which provides remote hydraulic control of any desired working limits.

Try the new 1600 on your place for size! Drive it, price it *now* for the tractor deal of the year! Oliver Corporation, Chicago 6, Illinois.

REVOLUTIONARY NEW CUSHION-ACTION TRIP!

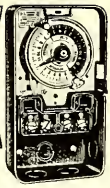
Another first from the plow-design leader: new Cushion-Action trip on the Oliver 361 and 362 mounted plows! Pivot point, located higher and farther forward, lets bottoms swing higher when tripped. Share doesn't bear full weight of plow. No dig-in. Cushion-Action saves shares, saves time. Also, Cushion-Action colters reduce blade damage, ride over and cut through bunched-up trash. The new 361 and 362 mounted plows are available now in 2, 3, 4 and 5 bottoms. See how Cushion-Action increases acreage per day, extends plow life!

OLIVER

Look for this sign, new symbol of prompt, dependable service and genuine Oliver parts.

*Maximum corrected PTO H.P., manufacturer's estimate

CUT COSTS!
REDUCE LABOR!
INCREASE PROFITS!



with

PARAGON
TIME CONTROLS

Paragon Time Controls are the best money-makers you can put to work on your farm — saving time and work, improving health, increasing profits.

- **FEEDING:** Paragon Time Controls assure absolute regularity in mechanized feeding — most essential to maximum gains and production.
- **GROWING:** Paragon Time Controls increase feed consumption through interval feeding, reduce waste resulting from over-feeding.
- **LIGHTING:** Paragon Time Controls have been used to increase egg production ever since lighting of layers began; now used to control maturity.
- **VENTILATING:** Paragon Time Controls improve appetite by supplementing thermostatically controlled fans, assure air removal every ten minutes.
- **SELLING:** Paragon Time Controls, used to illuminate roadside signs and retail stands will increase sales; require no seasonal adjustment.

You can rely on Paragon, time-honored name in Time Controls, for dependable, service-free performance. Time is money; control it with Paragon! See your authorized Paragon distributor, or write Dept 1841.

AMF PARAGON ELECTRIC CO., INC.
Subsidiary of American Machine & Foundry Company
TWELFTH STREET • TWO RIVERS WISCONSIN

Please send me your literature on modern Paragon Time Control Systems.

Name.....

Address.....

City.....State.....

A binder to hold copies of your National Magazine.

- Dark blue with gold lettering
- Holds up to 18 issues
- Issues easily inserted and removed individually

$3.00 EACH
2 for $5.00

Send check or money order to:

The National
FUTURE FARMER
Box 29, Alexandria,
Virginia

FREE
NEW 112 PAGE
CATALOG

Completely covers Leathercraft from luggage tags to saddle kits! Yes, hundreds of kits! Make leather items for pleasure . . . they're so inexpensive in kit form, yet there's so much PROFIT when you do it for RESALE. Write today for this big FREE CATALOG!

TANDY LEATHER COMPANY
P. O. Box 791VT Fort Worth, Texas

TRICKY and the TALL MAN

(Continued from Page 46)

The coach watched and watching, smiled. That was Tricky. That was the boy who had earned that nickname.

On the next jump, again Lighthouse was a little late, and Tricky's fingers got the tap. The next instant Tricky was off in the whirl of court action.

The second team challenged the best the varsity could offer. Tricky's drive and spirit brought out every ounce of talent and effort from the players on both squads.

It wasn't until the action had ceased for the moment that Tricky began to wonder about those center jumps. Had Lighthouse purposely kept from his best? Was that it?

At this point the coach blew his whistle.

"Enough for today, boys! Hit the showers!" And then, "Tricky, I'd like to speak to you, please!"

Tricky waited, feeling as though he were about to be cast out of the Garden of Eden.

The coach looked at him.

Tricky swallowed hard. Why didn't he come out with it? What was the use of this beating around the bush?

"You looked very good out there, Tricky. You're the kind of spark plug the team needs, you know."

Tricky swallowed again. He looked up at the coach. His eyes sank back away to the floor.

"Lighthouse let me outjump him there, a couple of times, coach. I couldn't beat him at center if—if I played a million years. He's—he's too good for me, sir."

The coach's hand came to his shoulder. "I know, Tricky! I saw! But, after all, he'll learn better after he's been here for a while, don't you think?"

"Learn better?"

"Yes! That wasn't teamwork, was it, Tricky? You can't let the other fellows down no matter how you feel, isn't that right? Isn't that what you are doing for the team—doing your best for the seconds—just as though they were the varsity?"

"Why—why—well—I—I—"

"Sure you are, and I'll expect you to keep it up. It's going to be a tough year with Bucky gone and trying to break Lighthouse in to our style of play with the fast break and all. You can teach him a lot, Tricky. He's not too good under the basket, and he hasn't got your bounce at the backboards and in general running," the coach smiled. "There's only one Tricky. You'll stay on the team and sub for him, won't you, Tricky?"

The coach's voice faded out of Tricky's ears. He went into a mental tail spin while the pain of the coach's decision cut through him like a knife.

Here it was, the thing he had been fearing ever since he saw Lighthouse. He had lost. He was not going to be the center at all. He was to be a stooge for Lighthouse. He was just a trial horse after all. That good old sub, Tricky—that was him!

Would anybody remember him as the guy that had helped develop that champ center, Lighthouse Harry?

The coach's hand tightened on Tricky's shoulder. He chuckled.

"I think Lighthouse knows now how you earned your nickname. You were burning up the boards! It was beautiful to watch! Every team needs good subs, Tricky. It's that thing called depth that we've needed to win a state championship. How about it? You think you'll like being captain of the top team in the state?"

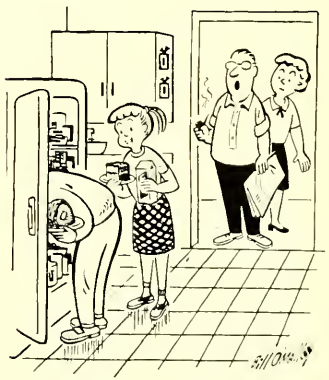
Tricky's eyes widened. "Captain?"

"That's right. The squad elected you captain last night after practice!"

What could he say. It doesn't pay, thought Tricky, to let your emotions run your thoughts or your body. It was going to be a swell last year after all. He watched the coach walk away.

The rest of the players were finishing their free-throw practice. He saw Lighthouse Harry head for the locker room.

Tricky met him at the door with a grin. "Hey, tall man, let's grab a quick shower and I'll introduce you around at the Malt Shop!" ◆◆◆



"If you ask me, I think he's going steady with our refrigerator . . . not our daughter."

Mr. Brush, leading cattleman and commercial sprig grower, shows neighbor a portion of his concentrated grazing pasture.

Texas Rancher grazes 112 head on 28 acres of Vertagreen-Fed Coastal Bermuda

Normal grazing rate in this part of the country is one head on up to twenty-five acres. Yet, Paul B. Brush has achieved a major and profitable breakthrough in concentrated grazing . . . averaging 2 lbs. of weight increase per day on cattle at his ranch near Tyler, Texas. His herd is carefully rotated, eliminating the risk of contamination, on four seven-acre, high-protein pastures of Coastal Bermuda grass. In addition, he cuts for hay every 21 to 28 days!

To make a success of concentrated grazing, Mr. Brush needed a fertilizer that would bring his pasture grass to the harvest point every three to four weeks. Significantly he selected *Vertagreen*, Armour's complete fertilizer and Armour Ammonium Nitrate. Armour Vertagreen 10-20-10 fertilizer is applied at the rate of 300 lbs. per acre on or around March 1. Then, after each of four cuttings at 21-28 day intervals, applications of Armour Ammonium Nitrate are made at a rate of 200-300 lbs. per acre.

"I am very happy with Armour fertilizers," comments Mr. Brush. "As a matter of fact, we've just completed a grazing experiment with some cattle, using Armour fertilizer. Results are in on that operation, and we are showing a $2,700.00 net profit in 9 weeks time. With Armour, it's a matter of how much hay you want! We are able to get three to five dollars worth of hay for every dollar we spend for Vertagreen and Armour Ammonium Nitrate . . . and we can do it every 30 days!"

Paul Brush has discovered that Armour Vertagreen is "Worth More Because It Does More!" From Florida to North Dakota...from New Mexico to Maine, thousands of profit-seeking farmers and ranchers have discovered the same thing . . . they tried Vertagreen once . . . they liked it, and they stayed with it!

This year, try Armour's top yield combination for profitable pastures and crops . . . *Armour Vertagreen* and *Armour Ammonium Nitrate.*

Worth More because it Does More!

ARMOUR AGRICULTURAL CHEMICAL COMPANY

Vertagreen, premium fertilizer / Mixed fertilizers, bagged and bulk / Ammonium Nitrate
Nitrogen Solutions / Anhydrous Ammonia / Ammonium Phosphate / Triple Superphosphate
Phosphate Rock / Armagard Pesticides

A Boy... A Goal... A FUTURE!

"So many people talk on the subject of farming, believing that the opportunities for a boy on the farm are not good. But those in the teaching profession with students such as Roger Prokosch know better."—*L. R. Ludtke, Advisor, Morgan, Minnesota, Chapter.*

"I SHALL become a State Farmer." These were the words of Roger Prokosch as he entered the eighth grade. That was three years ago—the same year in which his older brother, Tom, was preparing his application for the State Farmer Degree.

Tom did receive the degree, and his father was made an honorary member of the local FFA chapter. Roger set his goal to exceed this record.

The 480-acre Prokosch farm is located near Morgan, Minnesota, where Roger lives with his parents, Mr. and Mrs. Norbert Prokosch, and one brother and sister. Corn and soybeans are the principle cash crops. During the past three years they have automated their feedlots until now it is possible to handle 300 cattle annually. It is probable that Roger inherits much of his initiative from his father, who is rated as one of the more progressive farmers in the area. The latest in fertilization, chemicals, and feed utilization practices can be seen here.

As a freshman, Roger began his supervised farming program with three beef steers and five acres of corn. During the year he added 10 more steers, purchased two bred gilts, and raised 21 pigs from the two litters. His net income was a startling $1,192.70. This might seem high, but high yields and good management make the difference.

Roger increased his farming program the next year to include 20 acres of crops, five gilts, and a 10 percent interest in 110 production-tested feeder steers. During the summer he purchased five "farmer hybrid" gilts to add to the swine program. His goal is 15 sows farrowing throughout the year.

In addition to the other activities, Roger conducts corn yield trials for seed companies and last year received a 95 percent rating and a plaque for his efforts. This work he finances through the local bank.

He is keeping complete records on the 110 head of beef cattle. Because the breeder back in Montana needs information to improve his program, Roger supplies him with production records, feed efficiency, gain, and carcass quality. The automation on the farm helps to simplify this testing process. One-hundred-foot tubes take silage from the two silos to the various feedlots. A large 50- by 90-foot pole shed was built recently to house the animals. Roger was instrumental in making this shed and the recently concreted feedlots a reality.

In school Roger ranks high. He is taking a college prep curriculum, which includes six periods of class work daily. While he intends to become a farmer, he has his sights set on a degree in veterinary science at the University of Minnesota.

In FFA activities, Roger is chapter president this year and received the Chapter Farmer Degree at the annual Parent and Son Banquet. In addition to his many judging teams and committees, Roger is now reporter for District 10 of the Minnesota FFA Association.

Looking far ahead, this young Future Farmer set his goals: to become a State Farmer; be in competition for the district, regional, and state Star Farmer awards; make enough money to get through college; and be able to maintain his interest in the farming program he established.

Hungry Herefords! Part of 110 beef animals on record with Roger. He's also helped plan the feedlot mechanization.

304 BUSHEL CHALLENGE CORN PROJECT PAVES WAY TO HIGHER RETURNS PER ACRE FOR WINNERS... AND COMMUNITY

"An adventure in corn growing exclusively for Vocational Agriculture classes and FFA chapters"

. . . this is the 304 Challenge. Originating from the successful striving of a Mississippi farm boy, who made the only 300 bushel yield, the project has been hailed by Vo-Ag instructors as the finest program they've ever participated in. The 304 Challenge gets right at the heart of the problem of raising corn yields. Whether corn is marketed as corn, or livestock, farm management studies shows that high corn yields are the key to highest profits in farming. The Challenge paves the way to higher returns per acre for winners . . . and the community. The Stet, Missouri, Chapter topped over 400 FFA Chapters nationwide to win the 1962 National Challenger Award with a yield of 239 bushels per acre. Roger Milligan (right) represented the chapter in growing what was the second highest yield ever produced in Missouri.

The Producers of Funk's G-Hybrids invite your FFA Chapter to compete in 1963. Simply fill out the coupon below, clip and mail it today.

NEW COLOR MOVIE FOR CLASSROOM USE "THE 304 BUSHEL CHALLENGE"

Now you can see how a typical FFA chapter conducts their 304 Bushel Challenge Project from beginning to end. How they decide to participate, how they locate their field, plan their special practices, harvest their field. A brand new 16-mm sound, color motion picture—15 minutes in length—has been recently completed. You'll see the winning group receive their National Challenger trophy. And you'll learn some useful new information about corn. America's oldest crop. To obtain this new film—

Write to: The Venard Organization, Peoria, Illinois

FUNK BROS. SEED CO., Bloomington, Illinois

Gentlemen: Please send information on how our FFA Chapter can enter the 304 Bushel Challenge Project in 1963.

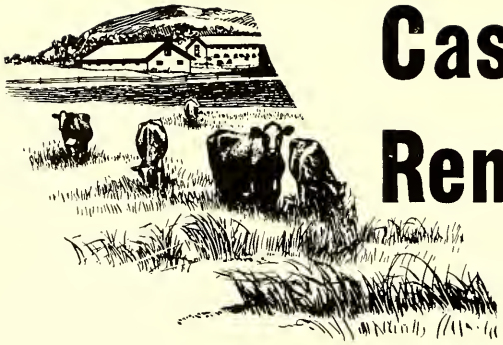
Name.....

Address.....

Chapter Name.....

Chapter Adviser.....

FUNK'S G HYBRID



Cash Rent or Sharecrop

By
John E. Kadlec and Paul Robbins

Consider these facts carefully before choosing your farm lease.

THE TYPE of lease Future Farmers have may determine whether they make or lose money. There is no "best" lease for all situations. The best type of lease depends on:

(1) The amount of risk you can stand.

(2) The amount of capital you have and alternative uses of this capital.

(3) The kind of land available.

(4) Your desire and ability to make management decisions.

(5) Farm maintenance costs.

(6) How the land is to be farmed.

Let us consider each of these factors along with a method of budgeting to "figure" which lease gives the highest return.

Risk and Profit

A cash-rent lease usually requires the renter to assume all risks of weather, insects, diseases, and price declines. In addition, the renter must pay a stated cash rent regardless of the returns from the crop.

With the sharecrop lease, however, the landlord usually furnishes part of the seed, fertilizer, spray materials, and sometimes other costs depending on the terms of the lease. The landlord receives a share of the crop as his rent; hence, he is sharing the risk.

Since the renter takes more responsibility and assumes more risk under the cash lease, he would expect to make a higher average income over a period of years than with a sharecrop lease. However, there is likely to be more variation in income from year to year with the cash lease.

Capital Required

The cash renter needs to be in a stronger financial position than does the crop-share renter. If weather and prices are favorable the first year, you could operate with limited capital. On the other hand, the first year or even the first two or three years could turn out unfavorably. The cash renter either should have some reserve capital or should be able to obtain it if needed.

You should carefully consider the alternative uses for your limited capital before deciding on which lease is best. For example, perhaps by crop-share rental you can invest your capital in more fertilizer, seed, and machinery and either do a better job on the same acreage or farm more acres.

Or, perhaps you could produce some livestock on the home farm. You might do custom work should you invest in additional machinery and equipment.

Land Available

The sharecrop lease is widely used in many parts of the country, whereas cash-rental land is limited in some communities. Since 1961, the Feed Grain Program has been a keen competitor for cash-rent land on which grain crops can be grown. Many landlords prefer to rent sharecrop in preference to cash because (1) they retain more control over the operation, (2) they usually make a higher net return, and (3) it gives them a good opportunity to invest some capital. Thus, in some communities it will be difficult to rent nearby land for cash.

Land that lends itself to intensive row crop production is well suited to either sharecrop or cash rental. Land that should be in meadow crops most of the time is usually better suited to either cash rental or a livestock-share lease. For some farms, the best solution may be a crop-share on the cultivated land and a cash rent for the use of meadow land.

Management Decisions

The landlord usually makes few management decisions on cash-rental operations. The renter usually has freedom to decide the amount of fertilizer to apply, variety of seed to use, and when to plant.

Young men need the experience of making decisions and of assuming the risks that go with these decisions. On the other hand, a good landlord who has spent many years in the farming business can often provide valuable management assistance.

Maintenance Costs

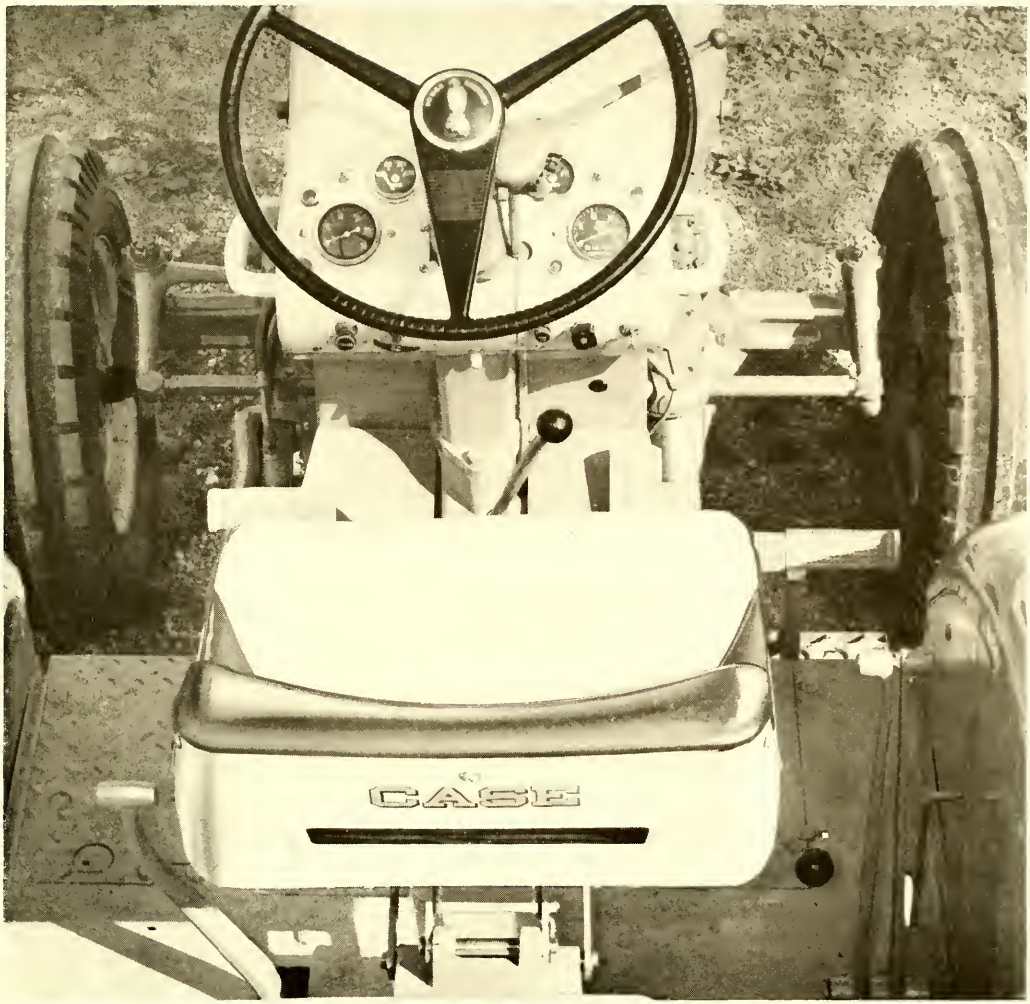
In cash rental, the renter is also likely to assume more of the responsibility for farm maintenance. The landlord may be less interested in applying needed limestone, maintaining adequate drainage, and repairing buildings and fences when income is in the form of cash rent. It is especially important under the cash rental agreement that the responsibility for farm maintenance be clearly specified.

The crops to be grown are important in deciding on the type of lease. For example, if you can cash rent land for $25 per acre and are permitted to grow high-income crops such as vegetables or corn, you can usually make a higher return on cash lease than if the land is sharecrop rented. On the other hand, if the landlord insists that the land be in low-income crops such as oats, barley, rye, or hay, it may be better to sharecrop lease or insist on a much lower cash rent.

Budgeting Costs and Returns

Probably the best way to decide on the type of lease is to do some "pencil

(Continued on Page 60)



This is an executive's chair

Here is a symbol of the farm machinery in your future. It places added importance on the alertness and well-being of the operator . . . as well it should. For no corporation head rates more consideration than today's businessman-farmer.

The seat you see above is standard equipment on the Case 930 Comfort King tractor. It is not a luxury. It is designed specifically to conserve the energy and increase the efficiency of its operator.

It gives him genuine comfort—with a commanding view. It helps him take full advantage of this tractor's acre-eating capacity . . . with less fatigue.

You may not be a prospect—yet. But drop in at your Case dealer's anyway, and have a look at modern, human-engineered farm equipment. It's a lesson you'll enjoy studying.

Take a NEW LOOK at

CASE®

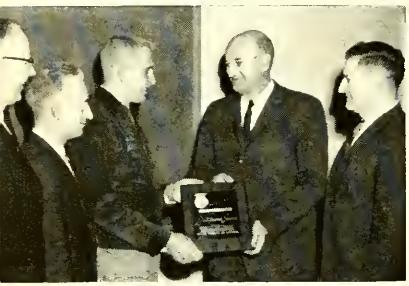
J. I. CASE CO. • RACINE, WIS.

The FFA In

Ten Tons of Future Farmers With Sixty Tons of Beef

VISITORS to the beef showing area of the Mississippi State Fair didn't have to look far to see Future Farmers. State officials counted 146 head of prime beef cattle; and on the other end of each halter was a Mississippi Future Farmer.

This marked the most entries FFA members had ever assembled at the State Fair at Jackson. A. P. Fatherree, state FFA advisor, called the group of animals the finest the FFA has ever shown. When the photographer finally got the huge group together and posed, he wondered what kind of show he would have to photograph if all of Mississippi's 223 FFA chapters had participated.

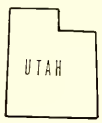


For His Contribution To West Virginia FFA Activities

STATE FFA President James Teets presented Dean Ernest J. Nesius of the state university's College of Agriculture with a distinguished service plaque.

The plaque was given in appreciation of Dean Nesius' service to the FFA and to those engaged in teaching vocational agriculture. The presentation was timed to coincide with West Virginia University's observance of the recent Land-Grant College Centennial. Dr. A. W. Tenney, national FFA advisor, was the main speaker at the seminar meeting.

Pictured left to right are Dr. Tenney; H. E. Edwards, state vo-ag supervisor; Jim Teets; Dean Nesius; and Dr. R. C. Butler, department of agricultural education. Future Farmer Teets is a freshman enrolled in the College of Agriculture.



FFA and Vocational Agriculture Is a Family Affair in Utah

ADVISOR Rex Jensen's Bear River Chapter in Garland-Tremonton, Utah, is claiming some kind of record after a count last term which showed 20 families having two or more boys in the FFA. And to top it off, there were two sets of twins!

Even with a 150-member chapter, this many brothers make the FFA a family affair. Two of the families had three sons each taking vocational agriculture.

With big brothers, little brothers, and twins . . . Advisor Jensen has quite a problem keeping track of projects, records, and family activities.

His problem is not an unpleasant one, though, and Advisor Jensen says the family approach is the pulse of the Bear River FFA program.

Keeping Their New Farm Shop Neat

DON CHASSE'S idea went right along with the new farm shop just finished at Enumclaw, Washington. He constructed a coat hanger to hold the 24 shop coats Future Farmers use in their shop work. In fact, Don's project was one of the first to be finished in the shop.

The coat hanger is made from the wheels and axle of a Model T. The tire was left on the wheel next to the floor as the base; then braces were welded on for strength. Metal dowel rods serve as the actual hangers, while a drum of sheet metal on the top gives each hanger a number.

The students are assessed $1.00 each for the cost of cleaning the two-dozen coats which are owned by the chapter. All six shop classes use the coats.

Across the U.S.A., Future Farmers are "Learning to Do; Doing to Learn; Earning to Live; and Living to Serve."

ACTION

Pretty Help If You Can Get It!

EACH YEAR when the Arizona FFA Association gets ready to mail Official FFA Desk Calendars to their honorary State Farmers, chapter advisors, and school administrators, they get the prettiest help around. The state FFA sweetheart and several sweethearts from neighboring chapters join in the task.

The 1962 Calendar mailing team was composed of Lennie Rhodes, state FFA reporter; Denise Gould, Agua Fria Chapter sweetheart; Sylvia Feaster, state FFA sweetheart from Tempe; and Bill Valentic of the Tempe Chapter.

It took the group a total of six hours of steady, but not too unpleasant, work to get the calendars ready to be mailed. Their reward—a very appreciative state staff.

FFA Leadership Training "Pays Off"

MORE THAN 1,700 ROTC cadets at Clemson College are now under the command of Cadet Colonel Joe H. Hughes, Jr., Southern Region vice president of the FFA in 1959-60. Joe's success in both the military and academic phases at college has been marked since leaving his positions of leadership with the FFA.

Before assuming command of the cadet corps last fall, Future Farmer Hughes was named No. 1 cadet among 1,200 ROTC cadets at summer camp. Not forgetting his academic responsibilities, Joe also ranks first among 770 Clemson seniors with a 3.87 average out of a possible 4.00.

Joe's farm back home in Duncan, South Carolina, has 50 head of registered Angus cattle and a large peach orchard, both of which he supervises during the summer.

Sing Along with The "Singing Greens"

ONE OF FOUR national finalists in the 1962 National Public Speaking Contest, 18-year-old Gary E. Green of Northeast Bradford FFA has a musical sideline. He's a member of "The Singing Greens," eight family members who have become popular in northern Pennsylvania and New York as entertainers at farm meetings.

A veteran of three years on the Pennsylvania FFA chorus, Gary also won a $500 scholarship to Penn State's College of Agriculture. He had a busy Christmas vacation singing, supervising his dairy animals and chickens, and attending a recognition dinner in his honor at the local high school.

From left in the picture are Lois, David, Gary, Wendy, Mrs. Green, Shirley, and Lorraine. The eighth member, Mr. Green, took the picture.

North Carolina FFA'ers Earn Scholarships

RALPH HAMILTON, Clinton Chapter, and Frank Abrams, South Edgecombe Chapter, both entered North Carolina State College in Raleigh after graduating from high school in 1962. They received the scholarships soon after entering college.

The two scholarships are sponsored by the Smith-Douglass Company, which has several offices in North Carolina. W. H. Payne of the sponsoring company stands at right in the picture, while Advisors W. E. Hamilton, Clinton Chapter, and J. T. Abrams, South Edgecombe Chapter, stand behind their respective ex-students.

Indiana Future Farmers Raise a Crop For CROP

FUTURE FARMERS from the Berne-French Chapter at Berne, Indiana, believe in helping others and themselves. They joined the national Christian Rural Overseas Program two years ago.

Now each year the Future Farmers donate an acre of their school farm to CROP's efforts in foreign countries. In the picture below from left, Chapter President Richard Yoder looks on as Brice Bauserman, county treasurer of CROP, receives the annual check from Max Reinhard, chapter treasurer. Advisor Doyle Lehman is at right.

Easy Fund-Raising Plan
SELL CANDY

Delicious Taste-Tempting
Jeanne Adriane
THIN MINTS
Wafer thin mints dipped in luscious dark chocolate. Retail for 50c a box. Your group earns generous profits. No need to pay in advance.
We Finance Groups
Order candy, hold event, pay later! No need to risk a cent. Write today for this profit-making plan.
GREETINGS UNLIMITED
3-678 Park Square • St. Paul 1, Minnesota

NEW WAY TO RAISE $50.00 AND MORE! IT'S EASY, FAST!
For Your Church or Group
Your group can raise all the money it needs, easily, quickly, without 1c cost to you! I'll send your group a supply of my assorted luxurious Prayer Grace Napkins in advance. Exquisite designs and prayer texts set a graceful, thankful mood at meals. Have 10 members each sell 20 packages; keep $50 for your treasury, send me balance of proceeds.
Never Spend 1c of Your Own Money
FREE Take up to 60 days; we give credit on napkins. You risk nothing to try my amazing tested plan, used by over 50,000 groups.
Rush your name and address now for details of my Plan which brings you fast cash, or valuable equipment for your group, sent free, no obligation. Write to
ANNA ELIZABETH WADE
Dept. 562HB, Lynchburg, Va.
FREE SAMPLES! RUSH NAME & ADDRESS NOW!

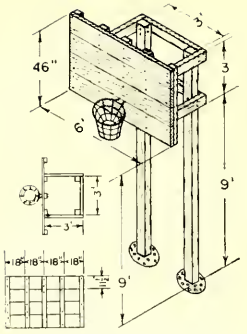
MONEY
FOR YOUR GROUP
Better Profits with Better Candies for Better Organizations
Make Money with McAfee's Delicious Candies! Enjoy profits of $50 to $144 per order.
Chocolate Covered Caramel Pecan Clusters, Chocolate Covered Almond Butter Toffee, Peanut Butter Nuggets or Pure Sugar Peppermints, Packed in Tins for Easy Selling.
Invest No Money! Pay After You Sell Your Order or Within 60 days.
McAfee CANDY COMPANY
Send In This Coupon for complete details on How to Make Money.
McAfee Candy Company Dept. F
Riggins Mill Road • Macon, Georgia
Please send me Facts on Money Making at No Obligation to me:
Name _____
Address _____
City _____ State _____
Club or Organization _____

Make Your Own

BASKETBALL BACKBOARD

By
Raymond Schuessler

Hey fellows! Want to have some fun making your own basketball backboard? Some lumber and a few after-school sessions can net you this official-size backboard. Follow these step-by-step instructions—and happy practicing!—Ed.



MATERIALS NEEDED

2 pcs. 4 x 4 in. x 16 ft.
6 pcs. 2 x 4 in. x 3 ft.
5 pcs. 2 x 4 in. x 3 ft. 10 in.
4 pcs. 1 x 12 in. x 6 ft.
24, ⅜ x 6 in. roundhead carriage bolts
40, ⅜ x 3 in. roundhead carriage bolts
Basketball hoop
1, ⅜ x 4 in. roundhead carriage bolts
Varnish or paint

THE POSTS for this basketball backboard are made of 4- by 4-inch lumber, each 16 feet long. The frame members are of 2- by 4-inch lumber, and the backboard may be of either 1-inch or 2-inch lumber. The regulation backboard is 4- by 6-feet, but a practice board may be made of four 11½-inch boards to produce a backboard 6 feet long and 46 inches wide.

First, add the two back braces, 2 by 4's, 3 feet long, to the posts, one flush with the top of the posts and the other placed so that its bottom edge is 3 feet from the top. Use two 6-inch, roundheaded carriage bolts ⅜ inch in diameter at each joint, first boring a ⅜-inch hole for each bolt.

The ends of the posts are set in holes 29 inches apart at their centers, from 8 to 12 inches in diameter, and 4 feet deep. At least the lower 5 feet of the posts should be treated with a wood preservative—either by dipping or by repeated applications of a brush treatment—before setting. Your lumber dealer will be able to recommend the best treatment for the wood you use.

With a carpenter's level, true each post as the holes are filled and tamped, using gravel, crushed brick, or rock. For a permanent installation a concrete mix should be used. Brace the posts for about three days until the concrete sets.

While the concrete is setting, the rest of the project may be made ready. Make the backboard, as shown in the detailed drawing, using 2 by 4's for cleats, one in the center, one at each end, and two placed midway between center and ends. Use 3-inch carriage bolts if 1-inch boards are used and 4-inch bolts for 2-inch boards. In either case, first drill holes ⅜ inch deep, using a No. 16 auger bit. Then drill holes ⅜ inch in diameter for the body of the bolt. The larger hole will allow the bolt head to fit beneath the surface where it will not deflect the basketball.

Then add the basketball hoop, boring holes in the backboard to fit the ring supports and using the hardwood supplied with the hoop. Regulations call for the hoop to be one foot from the bottom of the backboard and centered horizontally.

When the concrete has set, fasten the backboard to the posts. The bottom of the backboard should be level with the bottom of the lower post brace. This places it just 9 feet above the ground, as called for in the regulations, and makes the basket rim just 10 feet above the ground, as required.

As in the other parts of the assembly, the joints are all fastened with carriage bolts, using 6-inch bolts where the 2 by 4's join the posts and 4-inch bolts to fasten the frame to the backboard cleats.

Caution: In boring the holes in the posts, be sure they do not cross each other. Bore one set slightly beneath the other. Similarly on the backboard cleats, stagger the holes so the bolts will not interfere with each other.

The backboard may be sanded and varnished with outdoor varnish, or the entire assembly may be painted.

"Can't you teach him to bring in the paper after I deliver it, Mister?"

Meet the Ford that really swings!

First, there's a Swing-Away steering wheel available (it moves over 9 inches to let the driver in), only from Ford . . . ahem. Then there's the swinging good looks of luxurious interiors with beautifully color-keyed fabrics. And finally, there's the spirit of the Ford Galaxie 500 Convertible. Ford quality combined with Thunderbird dash. No wonder they say the Super Torque Ford Convertible is younger than swing time. A PRODUCT OF Ford MOTOR COMPANY

America's liveliest, most care-free cars

FORD

Falcon Fairlane Ford Thunderbird

FREE handbook tells how...

Earn more NET PROFIT with Registered Guernseys

This fact-packed booklet shows you how Registered Guernseys help dairymen achieve more economical production and greater profit. Contains these money-making ideas: Secret of proper feeding for more profit; improvement of dairy farm management; better record-keeping for success; how to start the Golden Guernsey program. Write today for your free booklet and many other free educational aids!

THE AMERICAN GUERNSEY CATTLE CLUB
Peterborough 16, New Hampshire

SUFFOLK LAMBS
Grow Quickly, Bring Higher Prices
Tests prove that Suffolk-sired lambs excel others in average daily gain. This means more profit for you because they reach market early when prices are high.
For free information and breeders' list, write
NATIONAL SUFFOLK SHEEP ASSOCIATION
P. O. Box 324F, Columbia, Mo.

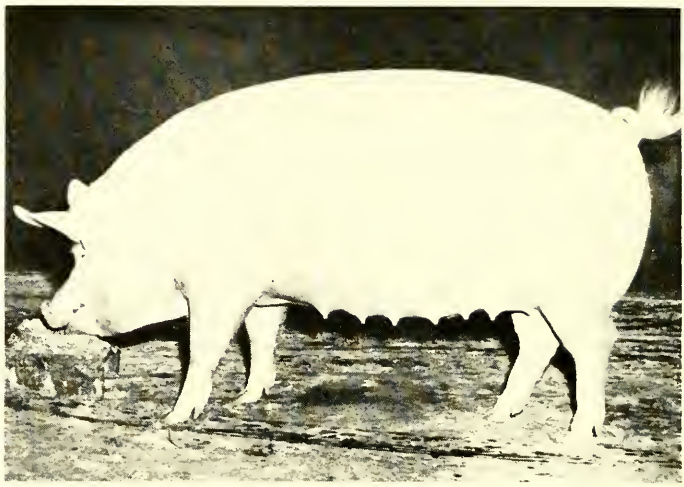
CHECKED YOUR GUNS LATELY?

When your firearms are stored, moisture in the air is their worst enemy. A clean firearm lasts twice as long — fires with greater accuracy.
SEND FOR FREE GUN CLEANING GUIDE
FRANK A. HOPPE, INC.
2339 N. Eighth Street, Phila. 3, Pa.

FOR all Official
FFA
MERCHANDISE

SEE YOUR CHAPTER CATALOGUE
ORDER FROM
FUTURE FARMERS SUPPLY SERVICE
Box 1180
ALEXANDRIA, VIRGINIA
Owned and operated by the Future Farmers of America

History of the Breed



The Yorkshire

Another in a series on the history of our livestock breeds.

LITTLE known to many American livestock men, the Yorkshire leads all breeds of swine in numbers throughout the world. This lean, white bacon hog is found in large numbers in Europe, the British Isles, Canada, and the United States where they rank third in total swine population.

Originally called the Leicester hog in Yorkshire County, England, they were developed by an English breeder, Robert Bakewell, early in the 19th century. Bakewell's early foundation stock were heavy-boned hogs with great length and some dark pigmentation in the skin. Breeding characteristics of prolificness, suckling ability, and carcass quality were emphasized early in the development.

In the latter part of the 19th century, these hogs, called the Large White breed by the British, began finding their way to both Canada and the United States. They were immediately labeled the Yorkshire breed by both countries to distinguish them from other white breeds of swine.

Finally in 1893, the American Yorkshire Club was formed to give breeders a means of registering their swine in this country. Then in 1948, there was a reorganization of this group into the American Yorkshire Club, Inc., with headquarters at Lafayette, Indiana.

During the period of lard's greatest popularity, the Yorkshire met with favor in only scattered sections of the United States, limiting the registering activity. As late as 1947, there were only between 4,000 and 5,000 Yorkshires registered.

As the breed's popularity increased with the consumer's switch to leaner pork, the majority of the breeding stock was imported from Canada. However, these Yorkshires did not have the growth rate, heavy bone, and ham demanded by commercial producers in the United States. So another mass importation of more rugged, stronger-boned breeding stock was undertaken from the British Isles to improve these characteristics.

The result was a hog that exhibited top prolificness, good carcass quality, and rapid growth. Recent testing station data has shown that the Yorkshire now ranks near the top in feed conversion and rate of gain. Breed records show that in 1962 Yorkshires were recorded from 44 of the 50 states with a record total of 11,817 litters and 29,414 individuals.

◆◆◆

To Profit-Minded Owners

Doane offers these profit-building farm services

AS THE HEAD OF YOUR FARM BUSINESS, you can raise profits by planning *now* for the future.

THE QUESTIONS YOU MUST ASK ARE: What is the most effective way to increase my profits?

> (1) Should I make changes in the type of operation I now have? (2) Can I keep my operation as it is, but introduce some new methods to increase efficiency? (3) Can I increase my profits only by increasing size?

To earn the highest income, you must first find the right combination of enterprises . . . and then get the best income out of them. Every year you operate at less than highest efficiency can cost you thousands of dollars. Thus, you have much to gain by consulting Doane Agricultural Service. Doane's 150 trained specialists are backed by an organization with over 43 years' experience in handling a wide variety of farm operations and farm problems. Write today for further information about any of the services listed below.

1. DOANE FARM MANAGEMENT

For non-resident owners, Doane Agricultural Service, Inc., manages a half-million acres throughout the U.S. Doane assumes complete supervision, planning all operations, securing tenants, buying supplies, selling farm products.

2. LONG-RANGE OPERATING PLANS

For resident owners or operators, Doane's management staff prepares complete operating programs, including income and expense budgets.

3. PRECISION FARM PROGRAMMING

High speed computing equipment is used to compare the relative efficiency of different types of operations for individual properties. The results show the combination of enterprises which will produce the highest net income for a farm or ranch.

4. CONSULTATION

Many operators find it profitable to consult a Doane farm manager about methods of increasing income or cutting costs. Consultations are made on any specific farm problem.

5. FARMSTEAD PLANNING

Rearrangement, remodeling or replacement recommendations for buildings and equipment to reduce labor and increase production.

6. APPRAISING

Property is appraised for guidance in buying or selling property, insurance coverage, condemnation, crop damage and estate settlements.

7. REAL ESTATE

Doane's licensed real estate brokers give both the buyer and seller of farm property the advantage of exceptional experience in agriculture, so that both parties may benefit in the transaction. Doane's national coverage brings properties to the attention of a large number of prospective buyers.

8. MARKETING RESEARCH

The Doane Research Staff serves companies that sell their products to farmers and ranchers. Proven Doane Market Research techniques provide first-hand knowledge of farmers' problems, production programs and attitudes.

9. DOANE BUILDINGS

Through franchised builders across the country, Doane offers over 400 buildings — cattle barns, machine sheds, dairy buildings, hog buildings, poultry houses and crop storage units.

10. DOANE AGRICULTURAL DIGEST

Twice-monthly marketing and management reports geared to helping farmers and ranchers make important operating decisions. Also includes Doane's monthly Business Magazine of "in depth" analysis of successful farming practices.

FREE • *Doane Report on Farm Program*

that provided $20,000 higher annual profit; and increased sales $100,000, with 6-man labor force instead of 10.

Write for this example of Doane Management Consultation at work. For this farm, Doane prepared 6 different enterprise combinations and budgets. Sales, expenses, and profits were figured for each different enterprise combination. Based on the Doane studies, a final plan was adopted as promising highest profits. Note the results of the new program after only 5 years.

DOANE INDIANA CLIENT:
1,084 acres (986 acres tillable)

OLD PROGRAM		NEW PROGRAM	
LABOR			
10 men plus manager		6 men plus manager	
CROPS			
Corn	488 acres	Corn	786 acres
Small grains	168 acres	Small grains	90 acres
Hay & pasture	330 acres	Hay & pasture	110 acres
LIVESTOCK			
Milking cows	160 head	Market hogs	4,300 head marketed
Bulls & heifers	90 head		
Sows	100 head	Fed cattle	700 head marketed
Boars	10 head		
Market hogs	1,800 head marketed		

*For **FREE** Farm Program Report, and further information about any of the Doane services listed above, write:*

DOANE AGRICULTURAL SERVICE, INC.
5144 Delmar Blvd., St. Louis 8, Missouri

CHEVIOTS

Thrifty, hardy, easy lambing, excellent producers. Cheviot rams sire superior market lambs. Literature, list of breeders free.
AMERICAN CHEVIOT SHEEP SOCIETY
Lafayette Hill 18, Pa.

HOW to BREAK and TRAIN HORSES

SEND FOR THIS FREE!

Make money. Know how to break and train horses. *Write today for this book FREE*, together with special offer of a course in Animal Breeding. If you are interested in Gaiting and Riding the saddle horse, check here ( ) *Do it today—now.*

BEERY SCHOOL OF HORSEMANSHIP
Dept. 2022 Pleasant Hill, Ohio

When you move, let us know! *The National FUTURE FARMER* will follow you wherever you go. Send us your old and new address. Include an address label from your last issue.

BUY FACTORY DIRECT!

WREN
Send 25c for brochure
Many Models

FARM ERRANDS! $99.95

$10.00 Down
$6.00 a Month
Complete with Clinton 2½ H.P. engine

RUGGED!

Bird Engineering, Box 427, Dept NF-W-3 Omaha, Nebr.

FREE OVERNIGHT PARKING

PLANKINTON HOUSE

Downtown
MILWAUKEE
WISCONSIN

1000 TRICKS 10¢

AMAZE! ENTERTAIN! START NOW!
BIG EXCITING MAGIC & FUN CATALOG! 160 Pages! Tricks, Jokes, Magic, Illusions, Secrets! Puzzles, Stunts, etc! Rush name, address and only 10¢
FREE MAGIC TRICK GIVEN
House of 1000 Mysteries • Dept F F 2-63 • Monroe, Conn.

EARN EXTRA CASH!

It's Easy to Take Orders for Advertising Book Matches!
Every business in town is your prospect. No experience needed, we show you how! Millions sold daily! Manufacturer offers you year 'round prestige opportunity with steady repeat earnings. Rush postcard today for details on FREE Sales Outfit, samples.

MATCH CORPORATION OF AMERICA
Dept. FN-23, 3433-43 W. 48th Place, Chicago 32, Ill.

CONVERT 26-IN. BICYCLE FRAME TO
MOTOR SCOOTER Street and Sports Models

STEP-BY-STEP Plans show you how. Simple welding your local shop can do. Build with or without parts kits.

PLANS only $1.50 (refundable)
18 Photographs, Actual Size Patterns, Illustrated Parts List. Order today!
- Automatic Clutch
- Positive Chain Drive
- High Speed Wheels

Practical Transportation For Fun, Work or School!

GILLIOM MFG. CO., St. Charles 63, Mo.

Cash Rent or Sharecrop

(Continued from Page 52)

pushing." One way you can compare a sharecrop and a cash-rent lease is to figure the returns over costs.

For example, Joe Brown has a chance to rent 20 acres nearby on either type of lease. He plans to plant corn. After talking with his father and recalling past yields, Joe estimates the maximum yield at 90 bushels, the minimum yield at 60 bushels, and the most likely yield at 75 bushels. Joe believes the price will be $1 per bushel.

Costs under the cash-rent lease include $25 per acre cash rent, $20 for machinery, $12 for fertilizer, $2 for seed, and $2 miscellaneous costs—a total of $61 per acre. The sharecrop costs include machinery and one half of the fertilizer, seed, and miscellaneous costs—a total of $28 per acre.

SAMPLE BUDGET

Gross Per Acre	*Sharecrop*	*Cash Rent*
90 bushels @ $1	**$45.00**	**$90.00**
75 bushels @ $1	**37.50**	**75.00**
60 bushels @ $1	**30.00**	**60.00**
Costs Per Acre		
Cash rent	....	**25.00**
Machinery and fuel	**20.00**	**20.00**
Fertilizer	**6.00**	**12.00**
Seed	**1.00**	**2.00**
Misc. crop costs	**1.00**	**2.00**
	$28.00	**$61.00**
Returns Per Acre		
90 bushels yield	**$17.00**	**$29.00**
75 bushels yield	**9.50**	**14.00**
60 bushels yield	**2.00**	**—1.00**

After subtracting costs from returns, Joe finds that in a bad year the sharecrop lease pays higher returns, but in a good or average year, higher returns can be gained from cash renting.

What should Joe do? This depends primarily on (1) his capital position (does he have the additional $33 per acre required?), (2) his desire to take chances and make management decisions, and (3) how well he can work with the landlord on joint decisions.

Free for You!

THESE booklets are free! You can get a *single* copy of any or all of them by mailing the coupon below. Just check the booklets you want and send us your *complete address.*

6—**Weed Control in Corn**—Weeds are the farmer's worst nuisance. This informative booklet tells how simple weed control with chemicals can be and helps you decide on the right herbicide. It explains how to control problem weeds such as giant foxtail and barnyard grass. Also discusses effects of rainfall, sunlight, and temperature on weed control. (Geigy Agricultural Chemicals.)

7—**Confinement Housing of Hogs**—Here are details on planning a confinement system for raising up to 600 hogs per year. Several floor plans are offered within this folder to meet flexible conditions. System includes areas for breeding, farrowing, nursery, and finishing. A handy multiple production guide to plan for six farrowings per year is included. (U.S. Steel.)

8—**The Desolate Year** — Does the world really need chemical pesticides? Should insects be left alone? Here's an action-packed reprint tracing what would happen to our nation if we went through a single year without insect controls. As unbelievable as they seem, all events are based on research-proven facts. This is "must reading" for all. (Monsanto Chemical Co.)

9—**Earn Greater Profits with Hampshires**—Every Hampshire breeder—prospective ones, too—will want this handbook to study and keep. Its 40 pages trace the Hampshire from its origin through the many production tests to facts about the national association. Has some important tips on how to get on the Production Registry Plan as well as qualifying for Certified Litters. (Hampshire Swine Registry.)

10—**Selection and Application of Galvanized Roofing**—Almost every farmer has to reckon with metal roofing. This pocket-size handbook uses photos and charts to tell how to choose roofing, then how to apply metal siding and lightning rods. Includes tips on which nails to use. A real handy reference. (American Zinc Institute.)

6 7 8 9 10
Send to: The NATIONAL FUTURE FARMER
Box 29, Alexandria, Virginia

Name .....
Route ..... *Box No.* .....
City .....
Offer not good after May 1, 1963

By
Stan Allen

Richie Guerin of the New York Knicks.

RICHIE GUERIN, 6-foot 4-inch back-court star of the New York Knickerbockers, once thought he was not good enough to play high school basketball. Today he is one of the game's outstanding professional guards.

The 30-year-old Guerin is a veteran of six seasons in National Basketball Association play. He turned in his best season last year with an average of 29.5 points a game for sixth place scoring honors in the N.B.A. Things have not always been so good for him though.

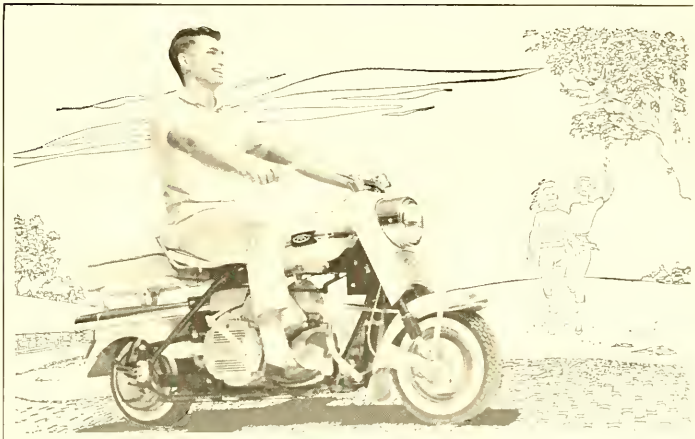
Guerin played his collegiate basketball for Iona College in New Rochelle, New York. He led all scorers in the New York City area in 1953 with a 24.7 average and 519 total points for the year. That season he was named to the All-Metropolitan team of the New York City area. He was drafted by the Knicks in 1954, but they had to wait two years for him to complete his military service. In the meantime, he kept up his game with the U.S. Marine team at Quantico, Virginia. He led their team in scoring both years and was voted to the AAU All-America team of 1955. In 1956 he was voted the Most Valuable Player in the Armed Forces Olympic Trials.

Guerin joined the Knickerbockers in 1956 and turned in a better defensive game than on offense. He scored 695 points in 72 games for a 9.7 point average. Guerin was determined to improve his shooting and spent many long hours on the practice courts, which he still does today. It paid off too, bringing his average points a game up to 16.5 in 1957, even though he missed the first nine games with a broken hand. His shooting continued to improve with a 21.8 average in both 1959 and '60. He was named to the second team of the All-League team in 1959.

His all-time Knickerbocker scoring record of 2,303 points last year was topped by only two other guards in league play: Los Angeles' Jerry West and Cincinnati's Oscar Robertson. His 8,665 points in six seasons is second to Carl Braun in all-time Knicks' total points. Braun has 10,449 points to his credit, but he scored those in 12 seasons. Guerin also holds the Knicks' one-game record for points: 57 against the Syracuse Nationals in 1959. He led the Knicks in another important offensive department, in assists. His 539 assists last season were good for fourth place in league standings. He had led the Knicks in that department for the past four seasons.

Guerin is an excellent play maker and has a good two-hand jump shot to go along with a good set shot. He is a deadly shooter at the free-throw line and holds the Knicks' team record for one-game free throws with 22 out of 23 tries. In a game against Syracuse this past Christmas day, Richie hit on 18 of 19 free throws. He is a good man on defense, grabbing 500 or more rebounds off the backboards for the past four seasons. This is a good record for a guard who is jumping against some of the giants in today's basketball. His aggressiveness is one of his biggest assets, as he plays all out in every game.

Richie has never played on a top-ranking team. Teamed with a few other good players, he could be one of the game's great guards. He has been named to six East-West All-Star teams and was voted to the All-League team last year. Going into the second half of this 1962-63 season, he is averaging better than 25 points a game. He is ranked sixth in league scoring at the present time. This kind of performance will keep adding marks in New York's record book and should earn him another berth on the All-League team this year. The Guerin story is not bad for a fellow who once thought he couldn't make the grade in the round-ball game.



Step up to the **CUSHMAN**®
SILVER EAGLE

Swing into the saddle of the Cushman Silver Eagle—a real man's machine! Travel to work, to school, around town—for just pennies a day, on the acknowledged king of the American road! Only Cushman Scooters offer the power, the smooth ride, the unfailing dependability that have made Cushman America's best-known motor scooters. For the thrill of your life, test-drive one at your nearby Cushman Dealer's, or write for free catalog and name of nearest dealer.

CUSHMAN MOTORS
"the big name in little wheels"
873 NORTH 21ST., LINCOLN, NEBRASKA • DIVISION OF OUTBOARD MARINE CORPORATION

The First One Doesn't Have A Chance!

"Whew . . . George Washington must have had a sharper axe than we do!"

A teacher who was giving a lesson on the wonders and powers of nature asked, *"Now, Tommy, can you tell us why lightning never strikes in the same place twice?"*

"I'll say," replied Tommy. *"After it strikes once, the same place isn't there any more."*

Stanley Tlucek
Nampa, Idaho

Highway sign near Springfield, Illinois: *"This may be the jet age, but brother, you ain't drivin' one yet."*

Frankie Gore
Tabor City, North Carolina

"Rick!" an Army colonel bellowed at his 18-year-old son one evening. *"You've been slacking off on your household duties. The car is filthy, the lawn is overgrown, the wastebaskets are overflowing, and furthermore, your room is a mess!"*

The boy offered the usual excuses.

Undaunted, his father continued. *"How do you think your mother likes doing all the work? She doesn't complain."*

"But that's different," retorted the son. *"Mom volunteered for this outfit. I was drafted!"*

Nellie Robinson
Nettleton, Mississippi

A youngster returning from his first day at school was greeted at the door by his mother. *"Did you learn anything at school today?"* she asked.

"You bet I did!" he replied. *"All the other kids get an allowance except me."*

Mike Rose
Clintwood, Virginia

A young bop musician had gotten a job on a farm. As the farmer was showing him around, the music man said, *"Man, dig that crazy barn! Dig that crazy tractor! Oh, man, dig that crazy goat!"*

After the farm tour, the farmer handed him a shovel, pointed to a potato patch, and said, *"Man, dig those crazy potatoes!"*

Robert Bosl
Sauk Centre, Minnesota

A burglar who had entered a poor farmer's house at midnight woke up the farmer. Drawing his knife, he said, *"If you move, you are a dead man. I'm hunting for your money."*

"Let me get up and light a match," said the farmer, *"and I'll hunt with you."*

Sally Green
Fairfax, South Carolina

Tom: *"They had a terrible time at the United Nations dinner last night."*

Bob: *"Why?"*

Tom: *"Every time they tried to pass something, the Russians vetoed it!"*

Shirley Lassiter
Aulander, North Carolina

Principal to small boy: *"It's very generous of you, Russell, but I don't believe your resignation would help our crowded school situation."*

Leon White
Windsor, North Carolina

The art of conversation isn't lost; it's hidden behind the TV set.

Calvin Martin
Darnell, Louisiana

A bachelor, left in charge of his baby niece, was faced with a crisis. He frantically called a young acquaintance who solved the problem in man-to-man fashion. *"First, place the diaper in position of a baseball diamond with you at bat. Fold second base over home plate. Place baby on pitcher's mound. Then pin first and third to home plate."*

Willard Rosenberry
Willow Hill, Pennsylvania

Dave: *"Did you hear why the cannibal got expelled from school?"*

Dean: *"No. Why?"*

Dave: *"He got caught buttering up the teacher."*

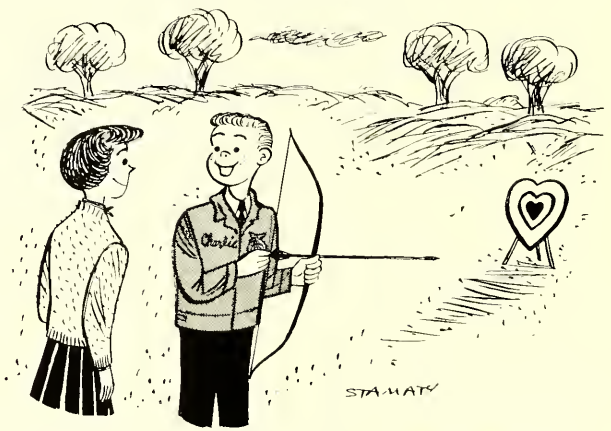
Dave Humelsine
Grafton, Ohio

In the early days of World War I, the officer in charge of a British station in the heart of Africa received the following telegram from his superior officer: *"War declared. Arrest all enemy aliens in your district."*

Promptly the superior officer received this reply: *"Have arrested seven Germans, three Belgians, two Frenchmen, four Italians, one Austrian, and one American. Please say with whom we are at war."*

Rebecca Dunnagan
Fredonia, Kentucky

Charlie, the Green Hand



"I wracked my brain trying to think up something appropriate on Valentine's Day."

The National FUTURE FARMER *will pay $1 for each joke published on this page. Jokes must be submitted on post cards addressed to The National* FUTURE FARMER, *Box 29, Alexandria, Virginia. In case of duplication, payment will be made for the first one received. Contributions cannot be acknowledged or returned.*

More than 3 years of tests in over 20 states prove new Du Pont "Lorox" gives outstanding control of both broadleaves and grasses in field corn grown for grain and soybeans grown for seed. Used as a directed post-emergence spray, "Lorox" plus Surfactant WK can help you grow clean corn—without weeds—as shown here.

This photo was taken ten days after a directed post-emergence spraying with "Lorox" plus Surfactant WK. Weeds are killed on contact and residual action will continue to kill weeds that may germinate later. This unusual two-way control facilitates a minimum tillage program—helps cut corn-growing costs.

New for Corn and Soybean Growers:

Du Pont "LOROX" controls weeds and grasses without problems to succeeding crops

Charles Adams, Akron, Indiana, points to a clean row of corn resulting from a directed post-emergence application of "Lorox" plus Surfactant WK. Note rampant growth of giant foxtail in his untreated corn at left.

"Lorox" can also be applied pre-emergence at planting time to give effective residual control of germinating annual weeds and grasses. This band treatment got corn off to a fast start, while untreated middles became choked with weeds.

In soybeans use "Lorox" only as a pre-emergence treatment to stop broadleaves and grasses as they germinate. Left, treated; right, untreated. Studies have shown no injury to crops planted three to four months after treatment.

On all chemicals, follow labeling instructions and wornings corefully.

DU PONT
REG. U.S. PAT. OFF.

Better Things for Better Living
... through Chemistry

LOROX™
linuron weed killer

For full information on this outstanding new Du Pont Weed Killer, send for a free copy of the 20-page, full-color booklet that shows you how to use "Lorox" and gives full information on proper equipment and calibration.

E. I. du Pont de Nemours & Co., (Inc.) I. & B. Dept., NFF-23
Room N-2539, Wilmington 98, Delaware

Please send me a free copy of the 20-page booklet on Du Pont "Lorox"

Name_____

Address_____

Town_____ State_____

DO RIGHT IF THE STARS FALL

A campus of unexcelled beauty? Undoubtedly! But the greatest values of Bob Jones University are those that cannot be seen. They are found in the lives of this institution's graduates -- Christian men and women, useful to God because Bob Jones University has instilled into them the importance of *doing right.*

In a day when character and conviction are rare commodities, Bob Jones University graduates are as outstanding as the "World's Most Unusual University" where their convictions were established and their character developed.

BOB JONES UNIVERSITY

GREENVILLE, SOUTH CAROLINA

Stands for the "old-time religion" and the absolute authority of the Bible

Music, speech, and art without additional cost above regular academic tuition. Institute of Christian Service, Academy, and seventh and eighth grades in connection. Graduate Schools of Religion and Fine Arts.